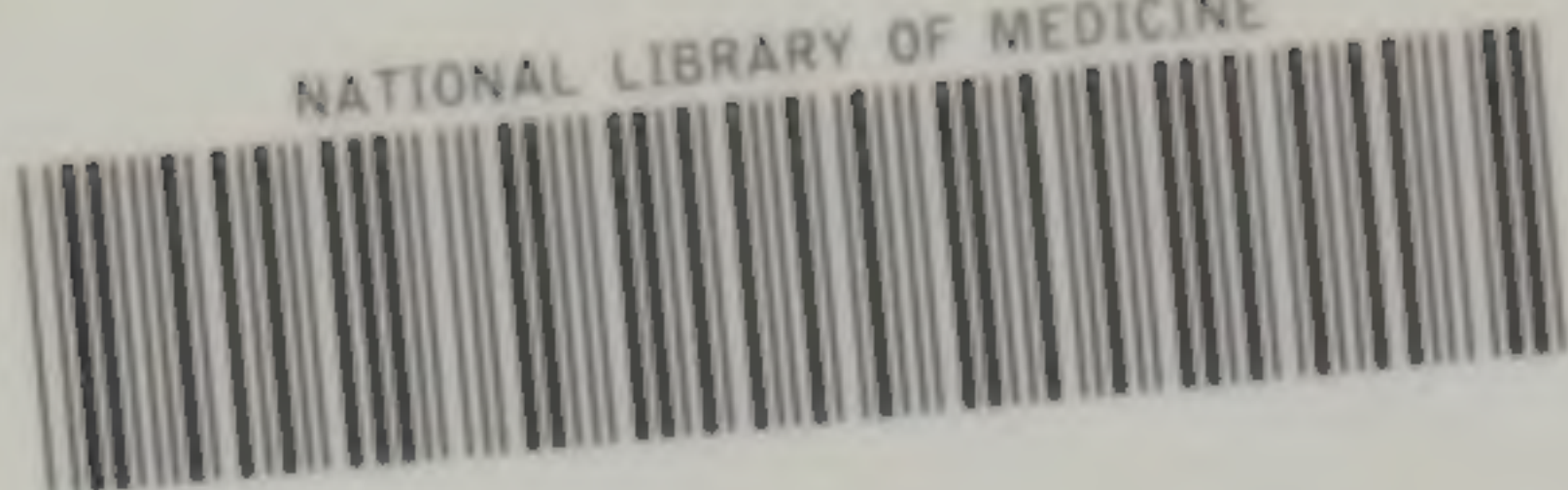






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BY

Prof. DAVID WARK, M.D.,

ALUMNUS OF THE NEW YORK UNIVERSITY MEDICAL COLLEGE; MEMBER OF THE NATIONAL MEDICAL ASSOCIATION; PROFESSOR OF OBSTETRICS AND THE MEDICAL AND SURGICAL DISEASES OF WOMEN AND CHILDREN; AUTHOR OF "THE PREVENTION AND CURE OF CHRONIC CONSUMPTION," "THE RENEWAL OF LIFE," "THE RATIONAL TREATMENT OF THE DISEASES OF WOMEN," ETC.

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## P R E F A C E.

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MANY works have been written by learned physicians instructing the medical profession in the proper diagnosis and treatment of diseases peculiar to women; but, as far as we know, none have hitherto been offered for the instruction of women themselves on this important subject.

Many disorders common to women begin at first as trivial affections. If these were recognized and properly treated at that time, not a few would be readily cured; but as the local treatment of uterine disorders by medical men is, from its very nature, repugnant to women, they defer seeking professional advice until their disorders have become so established, that a long, painful, and expensive course of treatment is often required for their cure.

The object in preparing this work is to place before women, in a condensed form, divested as far as possible of professional technicalities, the most recent scientific information concerning diseases of women, so that they may be able to recognize promptly many of the minor disorders to which they are subject, and to apply timely and successful home treatment.

The portion devoted to the diseases of children is enriched with many valuable suggestions received from my wife during its preparation. Her sympathies and practice having brought her into contact with a large number of little sufferers, qualified her, in an eminent degree, to ren-



der important aid in this department. The instructions laid down for the intelligent home-treatment of the various ailments peculiar to infancy and childhood, will enable nature's ever-watchful guardian—the true mother—to apply such prompt, simple, and timely remedies as will often save both health and life, as well as a large doctor's bill.

Such technical terms as it was necessary to use are fully explained in an alphabetical glossary.

A copious table of contents enables the reader to refer promptly to any subject discussed in the book.

DAVID WARK, M.D.

#### TO MY READERS.

---

Many readers of my Practical Home Doctor, suffering from complicated chronic diseases, write to me for special advice, and send statements of their symptoms of so imperfect a character that I am unable to determine the nature of their diseases, or to render them any effective assistance.

For the information of all such persons I make the following statement :

It is my intention to make the work a practical Home Doctor to all, whether the case be complicated or simple; and that no reader may lack any information necessary to secure nealth, I will upon receipt of the correct name and address of any sufferer, send a question blank arranged so comprehensively that when the symptoms have been filled in and returned to me, I shall be enabled thereby to make out and forward by mail an accurate statement of the nature of the disease. No charge will be made for this diagnosis.

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## GLOSSARY.

Abnormal—Unnatural, unhealthy.

Abdomen—The belly.

Abdominal—Belonging to the abdomen.

Albuminuria—Bright's disease.

Ammoniacal—Like smelling salts.

Amenorrhœa—Suppression of the menses.

Anodynes—Medicines that relieve pain.

Anæmia—Impoverished state of the blood.

Anorexia—Want of appetite.

Bath, Hip or Sitz—One in which the hips only are immersed.



- Capillaries—The small blood-vessels.  
Cardiac—Belonging to the heart.  
Catamenia—The monthly periods.  
Cellular—Made of cells.  
Cerebral—Belonging to the brain.  
Cerebrum—The brain.  
Coagulum—A clot of blood.  
Coccyx—Tip end of the spine.  
Coma—Unconsciousness.  
Convalescence—Recovery from illness.  
Colostrum—The first milk secreted after delivery.  
Comatose—Resembling coma.  
Congenital—Any peculiarity developed before birth.  
Cornea—The transparent front part of the eye.  
Cranium—The skull.  
Deodorize—To destroy smells or odors.  
Diagnosis—Determining the nature of disease.  
Diaphragm—One of the chief muscles by which we breathe.  
Disinfect—To destroy infection.  
Diathesis—An inherent tendency to disease.  
Diuretic—A medicine that stimulates the kidneys.  
Embryo—The child in the womb before the third month.  
Embryonic—Belonging to the immature child.  
Epidemics—Diseases, the poison of which is diffused through the atmosphere.  
Extra Uterine Gestation—Pregnancy outside the womb.  
Fallopian Tubes—The tubes between the womb and the ovaries.  
Fecundated—Made fertile.  
Fissure—A crack.  
Foetus—The child in the womb.  
Fontanelles—Soft places on the top of infants' heads.  
Follicles—Little bags.  
Foetal—Belonging to the foetus.  
Fundus—The uppermost part of the womb.  
Fungus—Plants of the mushroom tribe.  
Gastric—Belonging to the stomach.  
Gangrenous—Mortifying, decaying.  
Gestation—Pregnancy.  
Germination—Growing of a seed.



- Gravid—Pregnant.  
Hepatic—Belonging to the liver.  
Hemorrhage—Bleeding.  
Hemorrhoids—Piles.  
Hernia—Rupture.  
Hymen—The virgin membrane closing the vagina.  
Hygienic—Belonging to health.  
Hypodermic—Under the skin.  
Infuse—To make a tea by steeping in hot water.  
Labium—A lip. Labia—Lips.  
Lactation—Wet-nursing.  
Laxative—A gentle cathartic.  
Leucorrhœa—The whites.  
Ligature—A string with which to tie anything.  
Lochia—The discharges after child-birth.  
Macerate—To steep in water until soft.  
Malformations—Deformities.  
Maternal—Belonging to motherhood.  
Menopause—The change of life.  
Menstrual—Belonging to the monthly periods.  
Mucous Membrane—The lining of the digestive organs.  
Normal—Natural, healthy.  
Obstetrics—Midwifery.  
Obstetrical—Belonging to obstetrics.  
Omentum—Internal apron covering the bowels.  
Ovaries—Organs that produce eggs.  
Parturition—Child-birth.  
Parotid Gland—A gland secreting saliva.  
Parasite—Animals living on other animals.  
Pericranium—The membrane covering the skull.  
Peritoneum—The skin covering the bones.  
Peritonitis—Inflammation of the peritoneum.  
Pelvis—The cavity containing the womb, etc.  
Pelvic—Belonging to the pelvis.  
Pessaries—Instruments to support the womb.  
Peristaltic—Undulatory, wave-like motions.  
Placenta—The after-birth.  
Polypus—A soft tumor.  
Polypoid—Like a polypus.



- Portal—Belonging to the circulation entering the liver.  
Post-partum—After child-birth.  
Prognosis—The opinion formed concerning the termination of any case of disease.  
Pruritus—Itching.  
Puerperal—Belonging to pregnancy.  
Pulmonary—Belonging to the lungs.  
Pus—Matter issuing from wounds.  
Pubic Bones—Those at the lower part of the abdomen.  
Pulsation—Throbbing like the pulse.  
Post-mortem—After death.  
Rectum—The lower bowel.  
Scarification—Making small cuts.  
Serum—The watery portion of the blood.  
Septicemia—Blood-poisoning.  
Segments—Divisions.  
Sterility—Barrenness.  
Strumous—Scrofulous.  
Stridulous—Crowing, croupy.  
Suppuration—Formation of matter in a wound.  
Syncope—Fainting.  
Triturate—Rubbing together in a mortar.  
Tubercles—The specks of cheesy matter deposited in the lungs in consumption.  
Tubercular—Belonging to tubercles.  
Urethra—The water-passage.  
Umbilicus—The navel.  
Umbilical—Belonging to the umbilicus.  
Urination—Making water.  
Uterus—The womb.  
Uterine—Belonging to the uterus.  
Vagina—The middle passage.  
Vaginal—Belonging to the vagina.  
Vaginitis—Inflammation of the vagina.  
Varicose Veins—Dilated veins.  
Vertebra—One of the bones of the spine.  
Vertigo—Dizziness.  
Vesicle—Belonging to the bladder.  
Viscera—The intestines, the entrails.  
Vulva—The external female genital organs.



# DISEASES OF WOMEN.

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## CAUSES OF THE DISEASES OF WOMEN.

CIVILIZATION has done much to elevate woman in the social scale ; it has conferred on her a position quite equal to that enjoyed by man. Civilization has made woman refined, educated and intellectual ; she has been relieved by Christian civilization from the toilsome drudgery that is regarded by barbarous nations as being her proper employment. But civilization has not been to woman an unmixed blessing ; it has brought to her very serious drawbacks. Just in proportion as she has enjoyed the ease, comfort, and luxuries of civilized life, in about the same ratio she has become afflicted with diseases peculiar to her sex.

Perhaps the reader is ready to ask, are these diseases and the accompanying sufferings a necessary result of modern civilization ? Are there no means by which women may enjoy all the comforts of civilized life, its refinement, elegance and culture ; in short all its solid advantages, without sacrificing the physical vigor to which they are entitled ?

We believe that if women were aware of the causes to which their diseases can usually be traced, they would willingly avoid them as far as possible, and therefore escape many of the difficulties in question. We shall content ourselves by pointing out a few of the most influential causes.



## CRIMINAL ABORTION.

As soon as conception takes place, important changes begin in the womb and its appendages intended to provide nutriment for the rapidly growing embryo, and to progressively increase the size of the womb, in which it is to live for the specified time.

The muscular structure of the uterus rapidly increases; its bloodvessels enlarge and are filled with a rapid and full current of the best of the mother's blood. The mucous membrane lining the womb undergoes important changes of a singular character.

At the time Nature is intent on her work, if violent means be used to put a stop to her wonderful operations, is it any wonder she resents the outrage by inflicting severe penalties on the criminal? "Verily the way of the transgressor is hard." Statistics showing the frequency of this crime never can be compiled, because this great current of wickedness flows far below the surface of society unseen by the public eye.

The effects of criminal abortions on the feminine constitution are far reaching and destructive: they permanently impair the vital stamina. Women on whom operations of this character are performed often die from peritonitis, acute uterine inflammations, blood-poisoning, or hemorrhages from the womb. If they escape with their lives, obstinate chronic uterine disorders of an inflammatory character are apt to be developed, which frequently embitter their lives for many years.

The physical laws established by Nature for the perpetuation of the human species are intimately connected, not only with the continuance of the race, but also with the physical well-being of the individual.



Therefore when means are systematically practiced for the prevention of conception, the effects on a woman's health, both local and general, are very destructive. And when we consider how widespread and persistent the habit in question is all over the civilized world, as well as the unnatural and violent means commonly used, we are surprised the physical results are no worse than experience shows them to be.

#### EXERTION AND EXPOSURE DURING MENSTRUATION.

The changes that take place in the womb every menstrual period strongly resemble those occurring during the first few days after conception; but as there is no embryo to be developed, nor womb to be enlarged for its accommodation, the blood loading the uterine vessels is not required for these purposes. As it cannot be returned into the general circulation, it necessarily flows externally, constituting the menstrual discharge. At a time when the uterus and ovaries are intensely congested, and the nervous system unusually excited, ordinary prudence would teach women that they should remain at rest if possible.

Exposure to cold and wet should be carefully avoided. Yet many women from ignorance, and carelessness, or perhaps from imperative necessity, expose themselves to these adverse influences. The result is a total and prompt cessation, or at least a notable diminution of the menstrual discharge, and straightway the natural harmless and necessary congestion is converted into an active inflammation, which, if allowed to pass into the chronic form, will sometimes defy much treatment.



## EXERTION AND EXPOSURE AFTER CONFINEMENT.

The virgin womb is about three inches in length, two inches and a half in breadth, and one inch thick; its weight is about five hundred grains. At the end of pregnancy, before delivery, it is twelve inches in length, eight or nine inches in diameter, and weighs fully two pounds, irrespective of its contents. After delivery it returns in a short time very nearly, but not quite to its virgin dimensions. This essential process is hastened and its completion assured when the woman remains in bed a suitable time after labor; but if she gets up and resumes her usual duties while the lochial discharge still exists, the diminution in the size of the womb is retarded or perhaps permanently prevented from ever being perfectly attained.

As the recently delivered uterus is much heavier than at other times, and its natural supports are, at the same time, much weakened by the stretching they have undergone during pregnancy, displacements of a more or less severe character are almost sure to occur by getting up too early.

Lastly, the mucous membrane lining the womb is for a considerable time after delivery in a condition peculiarly liable to be unfavorably influenced, if the woman be then exposed to cold, wet, or fatigue. Imprudence after confinement can be justly charged with originating a large proportion of the disorders from which women suffer so much by exciting inflammation in the uterine mucous lining in the way here indicated.

## INADEQUATE BREATHING CAPACITY.

Breathing is the most important of the physical func-



tions, food and drink may be dispensed with for many days without destroying life, a fact conclusively proved by Dr. Tanner ; but if breathing be suspended for a few moments only life will be extinguished. Elaborate experiments have proved that the breathing capacity of women, in the vast majority of cases, is not sufficient to keep them strong and well, even if they had no other health-destroying influences to resist. This lack of breathing space has a two-fold malign influence on the system ; it depraves the quality of the blood, prevents its normal and equable circulation, limits the evolution of power, and strongly predisposes to the development of uterine congestions and inflammations with all their disastrous consequences. In order that the reader may understand how the breathing organs, when they are habitually in proper exercise, exert a healthful influence on the womb and its appendages, we shall briefly consider the mechanism of respiration.

THE RECIPROCAL MOTIONS OF THE RESPIRATORY, DIGESTIVE  
AND GENERATIVE ORGANS AS THEY OCCUR IN HEALTHY  
WOMEN.

The body is divided into three separate stories by two nearly horizontal partitions. The diaphragm separates the cavity of the chest from that of the abdomen ; a partition below forms a floor for the digestive cavity and a roof for the pelvis, the latter being occupied mainly by the generative organs. The upper part of the uterus is firmly fixed to the partition covering the pelvis. Now the diaphragm and the muscles of the chest are in ceaseless motion performing the act of breathing. In fact the diaphragm acts very much like the piston of a pump ; when it rises it draws up the





Fig 1.



Fig 2.

FIG. 1. Shows the natural outlines of a perfect female form. In such a woman the various organs in the chest, abdomen and pelvis are in their proper places, and have all the room required for the healthful performance of their several functions.

FIG. 2. Shows the outlines of a woman whose form has been distorted by the improper use of corsets, and other clothing. So great a departure from the natural external feminine form necessarily involves corresponding displacements of the internal organs. The lungs are thrust upward, and the motions of the diaphragm obstructed; the liver, stomach and spleen are forced backward, and crowded together. The intestines are depressed, causing the womb, ovaries, and the other internal generative organs to be displaced downward.



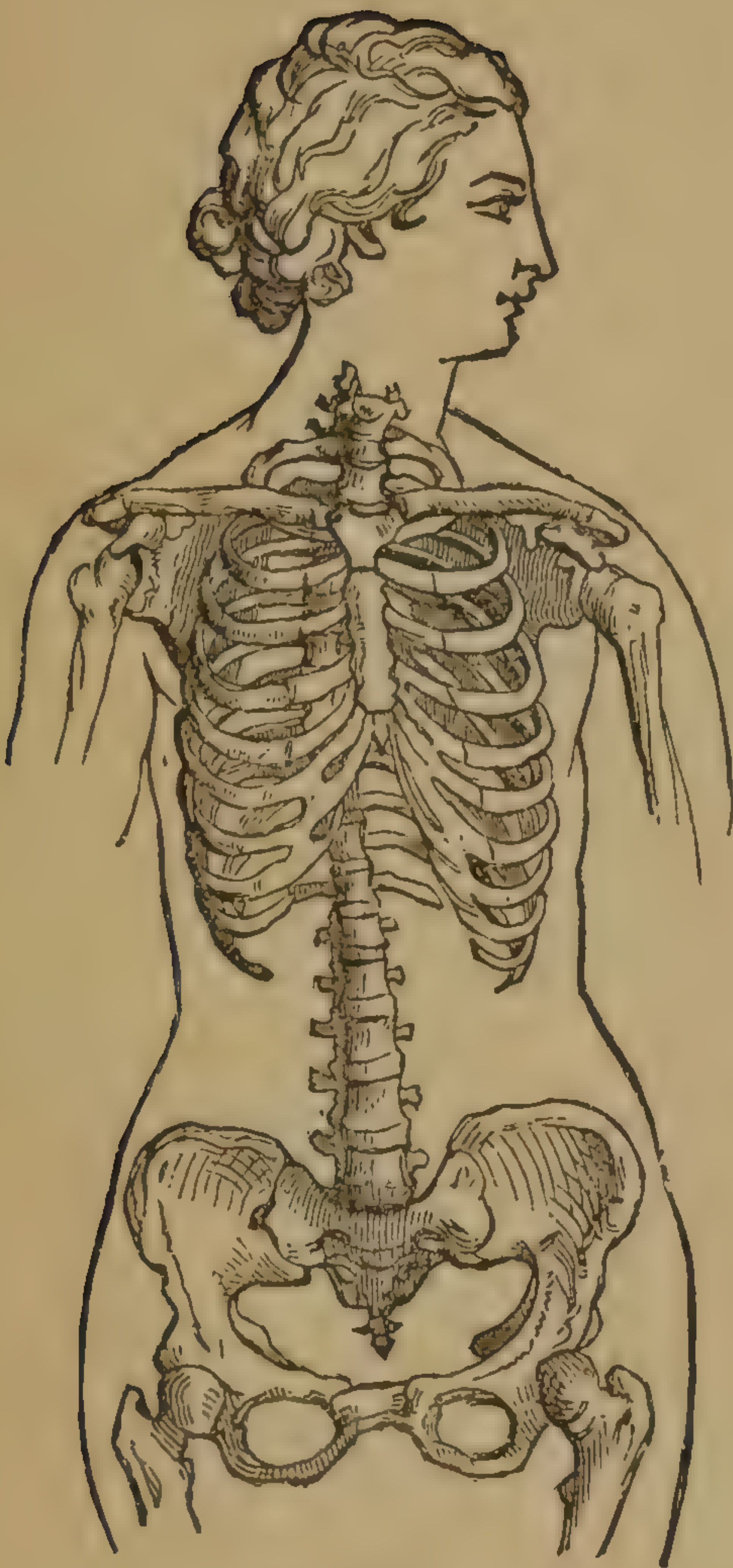


Fig. 3.

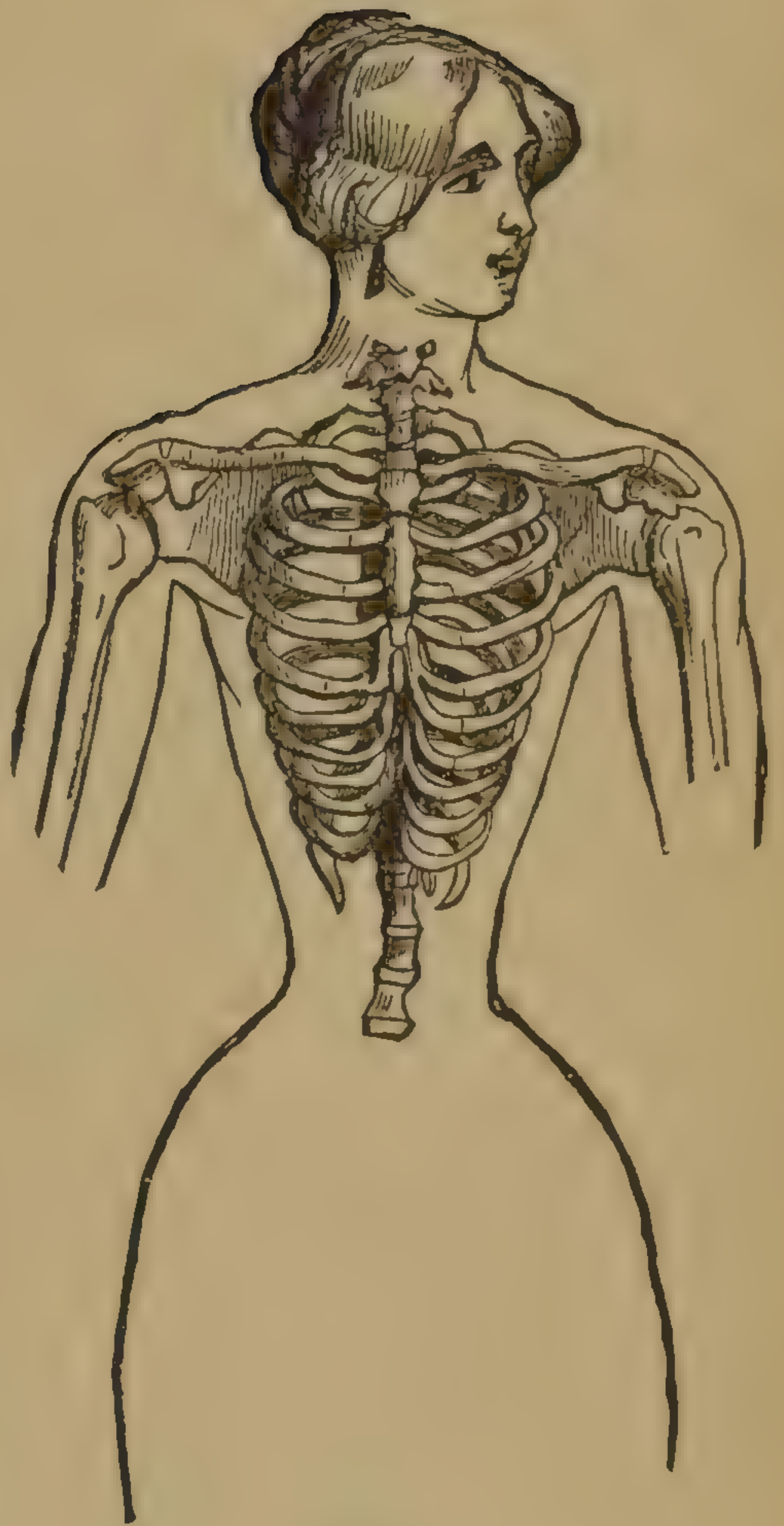


Fig 4.

FIG. 3. Indicates the natural proportions in a perfect female form, of the bony structures entering into the formation of the chest-walls, and the normal relations of the chest, which contains the breathing organs, to the generative viscera that are contained in the pelvis below.

FIG. 4. Shows the important alterations in the shape of the bones entering into the formation of the elastic chest-wall, which result from the gentle, but steady pressure of corsets and other clothing, when improperly used.



fleshy roof of the pelvis to which the uterus is attached, when it descends it pushes it down. The walls of the abdomen and that of the chest are at the same time made to play to and fro. The constant motion of the powerful muscles forming the floor of the chest and of the abdominal muscles is communicated through the contents of the abdomen to the lower partition to which the uterus is attached. These respiratory motions have so direct and positive an influence on the uterus, that, in healthy women, the motions of whose internal organs are quite free and unimpeded, the womb makes two distinct movements every time they breathe. When the diaphragm rises and the breath is expelled, it rises from one inch to one inch and a half ; because the roof of the pelvis is lifted about this distance, carrying the uterus with it. When the diaphragm descends and the breath is inhaled, it sinks the same distance, because of the gentle and normal pressure from above. The uterus and its appendages are thus naturally in constant motion up and down in very much the same way a woman's chest is seen to heave while she breathes.

SHOWING HOW THESE MOTIONS OPERATE TO MAINTAIN A  
HEALTHY CIRCULATION THROUGH THE UTERUS.

The womb is abundantly supplied with blood, therefore the circulation through it, when no impediment exists, is very free. Muscular action and the resulting bodily motion play a very important part in maintaining the general blood circulation. In fact, if any part of the body be deprived of motion its circulation quickly becomes disordered ; this is specially true of the uterus : motion gentle but constant is absolutely essential to keep up a healthy uterine blood circulation. But the uterus



is not under the control of the voluntary muscles; therefore it cannot be directly moved by them, but it is fortunately under the direct control of involuntary muscles that never, during life, cease their work as previously stated. Nature has thus made ample provision to keep the womb in motion. The natural ceaseless heavings of the lungs, chest and diaphragm with the abdominal muscles have the duty assigned them of communicating automatic motion to the uterus and its appendages. When the diaphragm descends and the lungs are filled with air, the uterus sinks in the pelvis in obedience to the downward pressure from above, as before stated; the circulation through the uterus is then for a moment retarded, but the next instant when the lungs are emptied of air and the diaphragm rises, the blood flows forward more freely than if it had not been momentarily obstructed. Nature has thus made ample provision to maintain a healthy circulation through the uterus.

#### THE CAUSES OF UTERINE CONGESTION AND INFLAMMATION.

The uterine motions we have described are constant and fully adequate for the purposes indicated, but various causes operate to limit these motions or prevent them so far as any useful purpose is concerned. When the natural stimulus of motion is withheld, the circulation becomes sluggish, resulting in congestion or, perhaps, inflammation; the womb gradually becomes displaced, falling backward on the rectum, forward on the bladder, or downward on the floor of the pelvis. The blood-vessels supplying the uterus have their caliber diminished by bending; the circulation in them is retarded just as the flow of water through a rubber



tube is obstructed by a kink. A very good idea of what occurs in the uterus under the conditions just described may be obtained by winding a string around the finger. As the coats of the arteries are thick the pressure exerted by the ligature has less power to prevent the arterial blood from flowing outward past the string to the end of the finger than it has to prevent the return of the venous blood toward the heart, therefore the part outside the ligature soon becomes congested, the blood stagnating in the capillaries. If the ligature be tight enough and kept on long enough, mortification will take place, and the part die; but if the circulation be only moderately obstructed the congestion will continue until ulceration occurs. This is precisely what takes place in the womb when the necessary natural stimulus of motion fails to be communicated to it, or when it is so far out of its proper place that the circulation therein is obstructed; little impediment is offered to the influx of arterial blood into the blood-vessels of the womb, but the venous blood escapes from the uterine veins with difficulty. Uterine congestion is thus established, which, if not relieved by suitable treatment, causes enlargement and hardening of the womb, accompanied in many cases, in due time, by inflammation and ulceration.

#### THE ERRORS IN THE TREATMENT USUALLY EMPLOYED.

One of the chief reasons why the usual treatment of diseases incident to women is so barren of valuable results is because it is so often addressed to the removal of secondary effects, while the fundamental causes are entirely overlooked. If a lady has been suffering long enough from some uterine disease to produce nerv-



ous disorder, and she consults a specialist in these diseases, he will be very apt to direct his treatment to the removal of the symptoms with which he is most familiar, ignoring the painful local affections by which they are caused. On the other hand, the uterine specialist directs his attention too exclusively to the womb, and applies treatment, frequently of so painful a character that the already shattered nerves are made worse by the severe remedies deemed necessary for the cure of the local affection.

The application of powerful caustics to every part of the uterus has been for a long time past, and is now, the almost universal practice. In a recent work, by a prominent foreign specialist, a number of these destructive chemicals is recommended to the medical profession; among others he mentions chloride of zinc, sulphate of zinc, chromic acid, nitrate of silver, strong tincture of iodine. These caustics should not be applied to any part of the uterus; such practice is painful, dangerous and less successful than milder measures.

Congestion and inflammation, acute and chronic, of some part of the uterus, with the effects resulting from these conditions, are the difficulties most frequently demanding treatment.

When the womb is either congested or inflamed, the blood flowing through it moves too slowly; in other words it stagnates in the vessels. No cure can be attained until the vital current is made to flow forward with a natural degree of freedom. The remedies usually employed for this purpose are leeches and sacrifices; by these means the blood is taken directly from the uterus, and temporary relief is obtained, but nothing is thus done to permanently improve the circulation.



Treatment competent to bring about this result effectively shall be indicated when discussing the several disorders in which it is necessary.

SHOWING THAT THE WOMB HAS NO SPECIAL TENDENCY TO DISEASE.

That the women of civilized nations very largely bring the uterine diseases from which they suffer on themselves is proved by the fact that the women of primitive nations are almost entirely free from disorders of this sort, while the females of the lower mammalia are entirely exempt. The position of the uterus in quadrupeds may seem to be more favorably situated in some respects than in women, but the advantage is more apparent than real. The internal generative organs in female quadrupeds of course cannot gravitate into the pelvis, and if women obeyed the dictates of reason their internal sexual organs would very rarely suffer prolapsus. When we consider how carefully Nature has protected the organs on which the perpetuation of the human race depends we think they should be exceptionally free from disease. They are enclosed in a strong bony case overlaid by the masses of muscle and fat that form the hips, and are thus much better protected from external violence than the brain, chest or spinal cord. As the womb is so deeply situated in the body it is very little liable to be affected by external variations of temperature, except when by a woman's folly she exposes her feet and limbs to cold and wet during her monthly periods.

Overdoing is often justly blamed for aggravating an already existing uterine disease, but it has very little influence apart from other more potent causes to origin-



ate disorder in a previously healthy womb. It is another class of women than the hard workers who suffer from the diseases under consideration. The functional activity occurring in the female sexual system, when an egg matures in the ovaries, is accompanied by an afflux of blood to the uterus, a fact that has led some authors to assert that the development of disease is thus favored. All organs during their functional activity receive an increased supply of blood, but they do not, as a consequence of this activity, have a tendency to disease, but to increased health. Nature kindly prevents the natural and necessary congestion of the womb from doing any mischief when she is allowed to pursue her course without interference by excluding the congesting blood from the system as the menstrual flow.

#### ITCHING OF THE VULVA.

Strictly speaking this distressing affection is not a disease, but only the most prominent symptom of some obscure disorder. It may occur in women at any period of life, although it is comparatively rare before marriage or middle life, but it is sometimes observed in young girls and in aged women.

*Symptoms.*—In many cases the irritation and desire to rub and scratch the parts are very slight. Sometimes the irritation is felt only after exertion, during warm weather—after getting warm in bed or when exposed to artificial heat, or just before and after the menses. As the disease advances the sufferer experiences a severe itching, burning, pricking or tingling sensation in the vulva; the suffering is far more intense than that caused even by severe pain, frequently destroying rest and driving the patient almost frantic.



It is almost impossible to resist the desire to rub the parts ; although this may afford temporary relief, it always aggravates the disorder. In some cases the itching is not confined to the external parts, but extends up the vaginal canal its whole length, causing unbearable distress ; sometimes accompanied by fever. When it occurs during pregnancy it is not only very distressing, but may cause an abortion or premature labor. When the attack comes on after delivery the suffering is specially severe, being aggravated by the tenderness of the parts.

*Causes.*—The causes are numerous and varied, and are not always easily discovered ; but with care and skill this can be done. The secretion of the glands of the vulva becomes a source of great irritation when it is allowed by uncleanly persons to remain long enough to decompose ; a change that takes place quickly in some individuals.

The irritation may be caused by an ichorus leucorrhœa issuing from the vagina bathing the parts and setting up the distressing symptoms already detailed.

Sometimes a thin, watery, but very acrid discharge issues from the womb in women who have passed the change of life, which occasionally produces severe itching and irritation of the vulva.

The discharge from uterine cancers will frequently not only cause severe irritation, but it is competent in many cases to produce extensive ulceration.

The same symptom is often caused by the escape of urine in aged persons due to paralysis of the bladder, producing irritation of the parts over which it flows. In other cases, severe itching is caused by chronic inflammation of the vulva. Occasionally, it is due to



the presence of animal parasites that may be any one of three kinds, the ordinary body louse, or the crab louse that confines itself exclusively to those parts; or the offender may be the little insect to which the ordinary itch is due.

*Treatment.*—When pruritus of the vulva is caused by uncleanliness, an abundant use of Castile soap and water will always effect a cure. When it is due to an acrid discharge of the whites; vaginal injections once, or better still twice a day, made according to prescriptions 1, 2, 3, or 4, will be very effective.

1 R. Powdered alum.....1 dram.  
Tepid water.....1 quart.

Dissolve the alum in the water, and use the whole for one injection. If the wash causes a disagreeable feeling of heat, the quantity of alum may be diminished. If the discharge be not quickly benefited, two drams of alum may be dissolved in the same quantity of water.

2 R. Sulphate of zinc.....1 dram.  
Tepid water.....1 quart.

Dissolve the sulphate in the water, and use the whole for one injection.

3 R. Bichromate of potash.....1 dram.  
Tepid water.....1 quart.

Dissolve the medicine in the water, and use the whole for one injection.

4 R. Geddes fluid extract hemlock.....2 drams.  
Strong carbolic acid.....30 drops.  
Tepid water .....1 quart.

Mix the medicines with the water, and use the whole for one injection.



The strength of any of the preceding washes may be slightly increased or diminished as the necessities of each case demand. In many cases it is safe to use at first a weak solution, and increase the strength if the effect be not satisfactory.

In addition to the local use of the above prescriptions, the patient should take, if she be pale, weak, and bloodless, one four-ounce bottle of prescription 5.

5 R.	Tincture muriate of iron.....	2 drams.
	Sulphate of quinine.....	20 grains.
	Glycerine.....	2 ounces.
	Water, to make altogether.....	4 ounces.

One teaspoonful in water after meals. If the mouth be carefully rinsed with water before and after taking this preparation, the teeth will not be discolored. If preferred a glass tube may be used.

If the disorder be caused by a thin discharge from the inside of the womb, very great relief may be obtained by the use of prescription 6.

6 R.	Glycerine.....	2 ounces.
	Essential oil of cade....	1 dram.

Mix the ingredients by shaking the bottle every time before using. Take a wad of fine cotton batting of a suitable size, tie a bit of twine about eight inches in length around its middle, soak it in the above remedy and pass it into the vagina as far as it will go without pain. This will temporarily block up the passage from the uterus and prevent the ichorous discharge from flowing over and irritating the external parts. The cotton should be removed night and morning, the passage cleansed by a large injection of tepid water, or a wash made after prescription 7.



7 R. Liquor potassa.....20 drops.  
 Tepid water ..... 1 quart.

Mix the remedies well by shaking or stirring, and use the whole for one injection. After having taken one four-ounce vial of prescription 5, the sufferer will be greatly benefited by the use of the following prescription :

8 R. Fluid extract false unicorn root.....2 ounces.  
 Fluid extract life root.....2 ounces.

One small teaspoonful in water three times a day after meals.

If the itching be caused by cancer, of course no cure can be effected except the deadly disease on which it depends can be removed, a result which, we regret to say, is rarely accomplished. The use of prescription 9 will, however, afford very great relief.

9 R. Permanganate of potash... ..20 grains.  
 Tepid water ..... 1 quart.

Dissolve the medicine in the water very carefully, and use the whole for one injection, two, or if need be, three times a day.

When pruritus of the vulva is due to the presence of vermin of the two first varieties we have specified, they may be quickly destroyed by dusting the parts freely with the following remedy :

10 R. Calomel.....2 drams.  
 White sugar.....2 drams.

Triturate the ingredients thoroughly in a mortar and use as directed. As soon as the vermin are extirpated the parts should be thoroughly washed.

If the cause of the itching be the common itch insect,



Acarus Scabiei, prescription 11 will readily effect a cure :

- 11 R. Sulphur.....1 dram.  
 Quicklime..... $\frac{1}{2}$  dram.  
 Lard.....2 ounces.

Triturate the ingredients together in a mortar. Rub the ointment into the diseased parts. After three hours wash with soap and water. The treatment must be repeated if the cure be not attained by the first application.

Paralysis of the neck of the bladder in aged persons may be greatly relieved, but cannot be permanently cured, as it is one of the effects of advancing age. The treatment that will do most good will be cleanliness, and the use internally of prescription 8 or 9.

- 12 R. Strychnia.....1 grain.  
 Dilute acetic acid .....20 drops.  
 Sulphate of quinine.....20 grains.  
 Dilute sulphuric acid .....20 drops.  
 Soft water.....4 ounces.

One small teaspoonful three times a day after meals.

- 13 R. Fluid extract scouring rushes.....1 ounce.  
 Water.....4 ounces.

One teaspoonful every four hours.

If chronic inflammation of the mucous membrane lining the vulva is to be charged with the irritation, poultices of slippery elm bark, or bread and milk, or linseed meal, will afford much relief. The parts should also be brushed over once every two or three days with a lotion made according to prescription 14.

- 14 R. Nitrate of silver.....20 grains.  
 Soft water ..... 8 ounces.

For external use only.



When no adequate cause for the distressing itching can be discovered, the following compounds often effect a cure. They may be tried one after another until the disorder be removed.

15 R. Sugar of lead.....2 drams.  
 Strong carbolic acid.....60 drops.  
 Tincture of opium..... 4 ounces.  
 Soft water.....1 pint.

Dissolve the sugar of lead in the water, then add the other ingredients, and shake the bottle to mix them. Moisten a soft cloth with the mixture, and apply it to the parts before retiring.

For external use only.

16 R. Dilute prussic acid.....:2 drams.  
 Vaseline .....2 ounces.

Triturate them together in a mortar. To be applied several times a day. For external use only.

17 R. Camphor.....:30 grains.  
 Chloral hydrate.....30 grains.  
 Vaseline .....1 ounce.

Triturate them together in a mortar. To be applied several times a day. For external use only.

The diet of patients who suffer from chronic itching of the vulva should be nutritious and digestible. No stimulants of any kind are admissible. The patient should avoid, as much as possible, the inclination to obtain temporary relief by scratching. All means tending to improve the general health should be used diligently.



## ABSCESS OF THE GREATER LABIA.

This disease consists of an acute inflammation of the cellular tissue and skin of the labia. It is observed in women of all ages, and may occur in either or both labia at the same time.

*Causes.*—The primary cause is mainly the peculiar state of the blood that gives rise to boils and carbuncles in other parts of the body; the disease under consideration is substantially a boil of the part. When the vital fluid is in a condition favorable to the development of localized inflammations of this sort, any blow, fall, or strain may give rise to the disorder.

Sometimes it occurs during pregnancy or after delivery, being probably caused by injury to the parts at the latter event.

*Symptoms.*—The sufferer's attention is usually first attracted by uneasiness in sitting or walking. The diseased side is observed to be larger and harder than the other. Heat, swelling, redness, and throbbing pain are very soon developed. In a few days the lump becomes soft by the breaking down of the solid material effused into the cellular tissue of the labium and the formation of matter.

This disease may be distinguished from ruptures passing down into the part by the fact that there exists no heat, throbbing pain, nor redness of the skin in hernia, and when the patient lies down the latter can be made to disappear into the abdomen by manipulation; but the size of a labium swelled by the products of inflammation cannot be diminished by pressure without causing great pain. Dropsy of the labia is sometimes observed; but if there be watery effusion into these parts it is almost certainly present in other por-



tions of the body at the same time. Dropsy may be recognized by the flesh pitting on pressure ; it comes on slowly, and the skin is free from the redness always accompanying inflammation.

*Treatment.*—Boils of the greater labia frequently begin, as they almost invariably do elsewhere, by the appearance of a minute red pimple which is so sensitive to the touch that the part feels as if it were pricked by a pin if the finger be pressed on it. If a few drops of blood be taken at this stage of the disease by pinching up the fold of the skin on which the pustule is situated, and passing the point of a very sharp penknife through the pustule, including the whole thickness of the skin in the incision, the inflammation will proceed no farther, and a cure be promptly attained.

But if the disease has progressed too far when first observed to be treated in the way above described, prescription 18 may be tried.

18 R. Tincture of arnica.....2 drams.  
 Tincture of opium.....1 ounce.  
 Soap liniment.....3 ounces.

To be applied to the parts continuously by soft cloths wet therein.

For external use only.

If the inflammation continues to advance in spite of this remedy, then poultices of flaxseed meal should be applied and changed frequently until matter forms, when a surgeon should be called to open the abscess. The opening should be made whenever the matter comes near enough the surface to be readily reached ; because although the pus will find an outlet sooner or later somewhere, still, if it be allowed to remain until



this occurs, it plays sad havoc with the parts by burrowing in various directions: and may find an outlet into the vagina or the rectum. If the bowels have been at all constipated, a cure will be favored by the very valuable laxative prescription 19.

19 R. Senna leaves. ....	1½ ounce.
Licorice root .....	1½ ounce.
Fennel seed.....	$\frac{3}{4}$ ounce.
Sulphur.....	$\frac{3}{4}$ ounce.
Sugar.....	6 ounces.

All the ingredients must be in fine powder, mixed perfectly; and take one teaspoonful stirred in a wine-glass of water before retiring for the night.

Boils are due to an impoverished and impure state of the blood; therefore, when one is developed, others are almost certain to follow. The constitutional cause from which they arise may be corrected by the use of the following pills for about two weeks:

20 R. Citrate of iron and quinine.....	1 dram.
Powdered licorice root.....	30 grains.

Confection of roses a sufficiency to make a mass, divide into thirty pills, and take one after each meal.

#### INFLAMMATION OF THE VULVA.—VULVITIS.

This is a disease affecting the mucous membrane lining the vulva: it may be limited merely to the membrane covering the parts, or it may extend to the cellular tissue below. Many varieties are described by medical writers, but for practical purposes there are but two—the simple and the gangrenous.

*Symptoms.*—In simple vulvitis the patient experiences a sensation of heat in the parts, and if the mucous



membrane lining the urethra be affected, the sufferer will feel as if her water while being passed were very hot. The parts are red, hot, swollen, and at first dry, then a free flow of matter occurs which stains the clothing a yellow color. As the disease progresses very small whitish ulcers may be observed scattered over the surface. Sometimes the inflammation extends to the vagina, in which case a copious discharge of creamy pus will proceed from that passage. In very severe cases there is fever with heat of skin and thirst.

*Causes.*—The most frequent cause is want of cleanliness; but it sometimes arises from acrid vaginal or uterine discharges and from menstrual disorders. Cases have been observed where the disease has been occasioned by pin worms escaping from the rectum, and lodging in the vulva, producing irritation of its surface.

*Progress and termination.*—It is quite likely this disease would get well of itself in time, but recovery would be greatly delayed, and if unrelieved would be apt to give rise to complications of a more serious character than the original disorder; but if it be properly treated, recovery may be confidently expected in a short time.

*Treatment.*—In all cases but the very mildest the patient should be kept in bed. If habitual constipation has existed previously, the bowels should be gently moved by a dose of the citrate of magnesia, or the following cheaper prescription:

21 R. Rochelle salts.....1 ounce.  
Ginger tea.....4 ounces.

Dissolve the salts in the tea and take one-third to one-half at a dose; if no laxative effect be produced in three hours another dose may be taken.



The inflamed surface should be bathed three or four times a day with warm water. If the discharge reddens litmus paper, showing it to be of an acid reaction, the following will greatly relieve the irritation that always exists under such circumstances :

22 R. Bicarbonate of soda.....2 drams.  
Powdered slippery elm bark.....1 ounce.  
Water.....1 quart.

Macerate for two hours, strain, warm it and apply it to the inflamed surfaces on soft cloths.

The following infusions may be drank freely to relieve the burning sensations caused by urinating :

23 R. Powdered slippery elm bark.....2 ounces  
Tepid water.....1 quart.

Macerate two hours ; strain.

24 R. Broom tops .....2 ounces  
Tepid water.....1 quart.

Macerate four hours ; strain.

25 R. Dried spearmint.....1½ ounce.  
Tepid water.....1 quart.

Macerate for thirty minutes ; strain.

In some of the severest cases warm poultices of slippery elm or linseed meal may be applied with great benefit. The surfaces of the poultices being sprinkled freely with prescription 26.

26 R. Liquor of sub-acetate of lead.....2 ounces.  
Tincture of opium.....2 ounces.

For external use only.



As soon as the acute inflammation has subsided, soft cloths soaked in the above preparation should be constantly applied between the labia to the inflamed surfaces.

In the milder cases the following remedies will be of great benefit after the acute symptoms have been subdued :

27 R. Golden seal powdered.....6 drams.  
Warm water.....1 quart.

Infuse one hour and strain.

28 R. White oak bark powdered.....1 ounce.  
Warm water.....1 quart.

Infuse two hours and strain.

29 R. witch hazel powdered.....1½ ounce.  
Warm water .....1 quart.

Infuse two hours and strain.

One of the above infusions should be applied to the parts constantly by means of soft cloths soaked therein.

The patient ought to sleep in a large, well ventilated room having an abundance of sunlight. After a cure is attained relapses may be prevented by perfectly cleansing the parts at least twice a day until the mucous membrane has acquired tone. Finally the following remedy should be taken for ten or twelve days as a constitutional tonic :

30 R. Tincture chloride of iron.....2 drams.  
Fowler's solution.....30 drops.  
Glycerine.....1 ounce.  
Water enough to make.....4 ounces.

One teaspoonful in water after meals.



The gangrenous variety of inflammation of the vulva is, fortunately, a rare disease. Epidemics have, however, been observed. It depends on a depraved condition of the blood, and attacks little girls more frequently than women.

The destructive ulceration starts from a small point, and spreads so rapidly that in a day or two the whole external generative organs may be destroyed. The vital forces rapidly break down, and death occurs if effective help be not rapidly obtained. There is, perhaps, no disease for the successful treatment of which more prompt and energetic measures are required. The little patient should be exposed to the fresh air, nutritious food and wine given abundantly. The following prescription is the best internal remedy known ; it should be given in teaspoonful doses every two or three hours :

31 R. Tincture of muriate of iron.....1 ounce.  
Glycerine.....2 ounces.

Shake the bottle before using.

The ulcerated surface should be carefully cleansed, and strong fuming nitric acid applied by a skillful surgeon to check the destructive ulceration ; the application of the acid should be repeated until the ulcerating process is subdued. After which the following poultice should be applied :

32 R. Linseed meal.....4 ounces.  
Powdered charcoal..... $\frac{1}{2}$  ounce.

Mix the ingredients and make them into a poultice.

#### HEMORRHAGE FROM THE VULVA.

There are about the vulva a large number of veins ; like those vessels in other parts of the body they may



become permanently enlarged ; in this condition they are said to have become varicose ; the walls of these blood-vessels are thus materially changed, being thinned, hardened and rendered inelastic.

*Causes.*—This peculiar condition of the veins is almost invariably caused by pressure preventing the blood flowing freely in its proper channels, the current being dammed back by some obstruction ; the walls of the veins yield after a time to the distending force. The enlarged womb, with its contents in advanced pregnancy, or a well-grown ovarian tumor squeezing the vessels inside the pelvis, by which the venous blood is returned from the lower parts of the body to the right side of the heart, are usually the obstructing bodies. When the veins are distended and their walls thinned, rupture, with copious hemorrhage, readily occurs. This may be occasioned by great muscular efforts, by a blow on the parts, or it may take place at the termination of labor, when the tissues are distended to the utmost. Sometimes, when delivery by forceps has been found necessary, direct injury by the instruments has ruptured the veins and produced a dangerous hemorrhage.

*Treatment.*—When varicose veins of the vulva rupture, the loss of blood is so great as sometimes to destroy life before medical assistance can be procured. Many valuable lives have been lost when the sufferers were otherwise in good health, simply because they were ignorant that well-directed pressure is invariably effective in staying the flow of blood for the time being. A towel may be made into a hard roll, which should be pressed firmly on the bleeding veins by the hand ; or it may be held there by a bandage passed between the thighs, drawn tight, and attached to a strap around the



waist. The pressure must be kept up without intermission until a surgeon can be procured, who will take means to arrest the flow of blood permanently.

EFFUSION OF BLOOD INTO THE GREATER LABIA.—PUDENDAL THROMBUS.

The disease just described differs from that under consideration mainly in the fact that in the former case the blood flows externally, in the latter it only escapes from the vessels into the substance of the labium. When a vein has been ruptured, a lump is formed in the labium consisting of clotted blood effused into the cellular tissue. If a large blood-vessel has given way, the swelling may suddenly become as big as a small orange; but if the ruptured vein be small, it usually grows slowly and rarely exceeds the size of an almond or horse-chestnut. This disorder may occur either in the pregnant or non-pregnant state; but those taking place in the former condition are, for obvious reasons, usually the most extensive.

*Symptoms.*—The smallest effusion of blood into either labium causes a sense of discomfort; while if it be at all large, pain and throbbing will be present, the patient perhaps being unable to sit or walk.

There are several disorders of the part for which the disease under consideration may be mistaken; for instance, it resembles abscess of the labia in the fact that in both there are swellings, but in the former it is hard and is accompanied with heat and redness. At first there are no such symptoms observed in this affection; but if the effused blood be not absorbed, an abscess may be formed in a few days and inflammatory symptoms be developed.



Ruptures sometimes descend into the labia and may form there swellings of considerable size. In ruptures the contents of the sack can be pressed back into the abdomen, but this cannot be done when blood is effused into the part whose disorders we are now studying. Lastly it may be mistaken for dropsy, but dropsy here is almost invariably accompanied by watery swellings in other parts of the body.

*Treatment.*—If the quantity of blood effused be very small, the tumor formed by it not being larger than a horse-chestnut, it will generally disappear of itself. No treatment being needed except to keep the patient perfectly quiet—she should be placed in bed. If she continues about her ordinary duties, a hemorrhage, which would otherwise have been very small, may be greatly increased by exertion. A favorable termination may be confidently expected by such simple means, if the woman be not pregnant; but if she be in this condition a much smaller effusion of blood is apt to cause trouble; complete rest in bed in any case of the latter sort is imperatively demanded. A cooling absorbent lotion such as prescription 33, may be kept constantly applied by means of soft cloths steeped therein.

33 R. Fluid extract poke root.....2 drams.  
Muriate of ammonia.....1 dram.  
Water.....1 pint.

Dissolve the muriate in the water, and shake up with the other ingredients.

When the liquid part of the effused blood is absorbed, a hard lump may remain, and after a time become covered by a membrane which protects the adjacent tissues from irritation; in the same way that leaden



bullets become encysted and remain in the body for a long time doing little or no injury. Under such circumstances it is best to let the hardened clot alone, except its size causes annoyance, when it should be removed by a surgical operation.

When the clotted blood forms a tumor of considerable size, the encysting process rarely takes place, and if it be allowed to remain in the part to cause irritation, an abscess develops sooner or later, the contents of which must be evacuated by a skillful surgeon.

#### DROPSY OF THE LABIA.

Effusion of water in this part of the body, as we have previously mentioned, is usually accompanied by collections of fluid in other situations.

When the disease is altogether local, it occurs almost invariably in pregnant women, especially those who are much on their feet during the latter months of gestation.

*Symptoms.*—There may be observed a smooth uniform enlargement affecting both sides alike; the skin has a sodden, dull appearance, painless at first but sometimes becoming painful when the parts are greatly distended. Dropsy may be distinguished from ruptures descending into the labia by the fact that the dropsical parts pit on pressure, while hernial tumors do not: again, ruptures can be returned into the abdomen by the aperture through which they escaped; but the size of the labia distended by dropsy cannot be reduced by pressure in the same way.

*Treatment.*—When this disorder occurs in pregnant women, rest in bed or on a lounge, is urgently needed for a time in order to prevent more serious mischief.



Pressure by a properly adjusted bandage attached to a belt around the waist will be of much service.

In cases of dropsy of the labia due to advanced pregnancy, these measures will palliate the difficulty effectively until delivery ; but if the dropsy be general it is only a symptom of some grave disorder, possibly of the liver or kidneys. Under these circumstances a physician must be employed who will trace the trouble to its source and treat that.

#### HERNIA IN THE LABIA.—RUPTURE.

A loop of small intestine, a bit of omentum, or even one of the ovaries may descend through a rupture in the wall of the abdomen into one or both of the labia, and distend them in the same way that the male scrotum is sometimes filled by a portion of the contents of the abdomen. This difficulty is not so dangerous in the female as in the male, because the probability that strangulation will occur is less in the former than in the latter.

*Causes.*—Ruptures are caused by violent muscular efforts, lifting, falls, blows on the part, straining at stool while very constipated, severe labor in childbirth ; and the influence of all these is favored by a natural tendency to the development of hernia.

*Symptoms.*—Ruptures may be distinguished from other difficulties having similar symptoms, by the fact that the protruding parts can be pushed back into the abdomen while the patient lies down. Other swellings cannot be so treated. If the patient coughs or sneezes while the rupture is down, an impulse will be communicated to it, and it will become larger and harder for the time being. There are no heat, redness nor painful throbbing usually accompanying a rupture.



*Treatment.*—The only remedy is a properly adjusted truss: Marsh's instruments we have found to be the best. When the opening in the abdominal wall is large, the pad must be ample, and be kept down on the rupture by a strap passing between the thighs and attached behind to a belt around the waist.

#### INFLAMMATION OF THE VULVO-VAGINAL GLANDS.

On each side of the vaginal orifice, at the points where the lesser merge into the greater labia, are two glands, each nearly the size of a hazel-nut. Their ducts are about three fifths of an inch long, and open outside the hymen, when that membrane exists. These glands sometimes become inflamed: when they do, they cause a woman enough distress to make her miserable; but not sufficient to induce her to seek medical aid, until her disease has run a tedious course.

*Symptoms.*—In the early part of the attack the usual symptoms of inflammation may be observed; heat, pain, redness and swelling. After a short time, matter is formed and pours from the orifices of the ducts. Sometimes only one, but not unfrequently both glands are affected.

The natural tendency is toward recovery, but if left entirely to itself it gets well very slowly, if at all.

*Treatment.*—If the disease be observed before pus is formed we should endeavor to prevent suppuration; for this purpose cloths wet in a lotion prepared after prescription 34 will often be successful.

34 R. Camphorated oil.....3 ounces.  
Fluid extract belladonna.....1 dram.

Mix by shaking the bottle.

For external use only.



Much pain is often caused by the matter being imprisoned, and distending the glands, sometimes to the size of a horse-chestnut or larger. When this occurs hot poultices of linseed meal or bread and milk should be applied; these will rarely fail to afford relief. But if the matter cannot escape because the orifices of the ducts are completely blocked up, a surgeon should be employed to open the distended cavities and prescribe the subsequent treatment.

#### COCCYODYNIA.

This is the name of a somewhat curious and very frequent disease, consisting mainly in pain of varying intensity at the lower end of the spinal column. It may be felt by the patient whenever she sits down or rises up. Sometimes the sitting posture is painful, and occasionally this is the case even when the sufferer remains in bed. In some the pain is aggravated by every step, while others are quite comfortable while walking; some feel the pain most acutely when the bowels are moved: in short almost any motion or position by which the tip end of the spine is moved may excite pain. In some cases the suffering is of a rheumatic or neuralgic character, in others it consists simply of an extremely sensitive condition of the tissues of the painful part: more rarely the pain is due to an inflammation of the periosteum or of the same condition of the joint between the coccyx and the bone above.

*Causes.*—It may be caused by blows or any sort of violence: as by falling on the pavement, by injury to the bone during severe childbirth, by delivery with instruments on a like occasion, or by sitting on hard cold



seats. Apparently an injury received years before has finally developed into severe coccyodynia.

*Treatment.*—Whenever a patient complains of pain in the coccyx, who at the same time is affected by pains in other parts of the body, and has the pale bloodless look of those who are subject to neuralgia, it would be well to use internally the prescriptions 35 or 36. One of these may be taken after the other until the quality of the blood be improved.

- 35 R. Pyrophosphate of iron.....30 grains.  
 Boiling water..... 2 ounces.  
 Dissolve the iron in the water and add whiskey.  $\frac{1}{2}$  ounce.  
 Fluid extract gentian.....  $\frac{1}{2}$  ounce.  
 Water enough to make..... 4 ounces.

One teaspoonful after meals.

- 36 R. Tincture of the perchloride of iron.....2 drams.  
 Glycerine.....1 ounce.  
 Spirits of chloroform.....2 drams.  
 Water, to make.....4 ounces.

One teaspoonful after meals.

The following preparation should be freely applied to the skin covering the painful part and over this a hot poultice of linseed meal.

- 37 R. Solid extract belladonna.. .....2 drams.  
 Vaseline.....1 ounce.

Triturate together in a mortar.

For external use only.

In some cases these measures will effect a cure, in others they fail. When little or no relief is obtained by medical treatment, a surgical operation must be per-



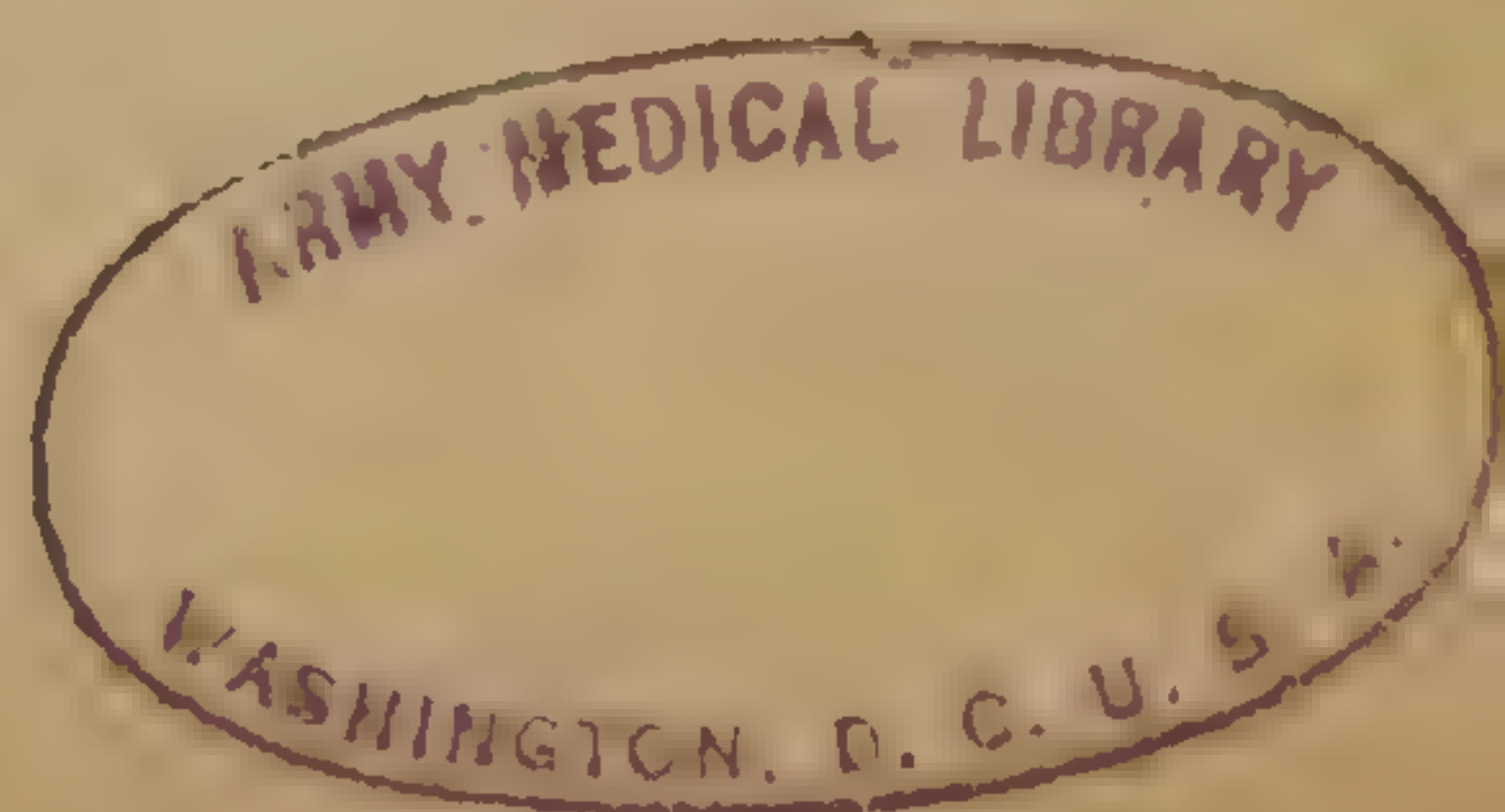
formed for the purpose of separating the bone from all the muscular fibres attached to it. In the most obstinate cases the complete removal of the coccyx is demanded before a complete cure can be effected. By either of these measures success can always be attained.

#### HYPERESTHESIA OF THE VULVA.—VAGINISMUS.

This affection consists of an excessive sensibility about the orifice of the vagina. The tenderness is often confined to a painful spot; but very often neither redness, swelling nor any other appearance of disease can be seen. The absence of all visible indications of disease proves the difficulty to be of nervous origin; a conclusion borne out by the fact that the tender spot often changes its location. Although vaginismus was until a few years ago totally unknown to the medical profession, the attention of physicians having only lately been called to it, the disorder is by no means uncommon. It occurs both in the single and married, but those who seek relief from the doctors usually belong to the latter class.

*Causes.*—It is rarely a primary disorder, but is only a symptom of some other difficulty; it may be caused by an excessive irritability of the whole nervous system. In some cases it seems to be a local expression of the hysterical condition. Sometimes it depends on a fissure at the vaginal opening, and it is occasionally due to chronic inflammation of the vagina.

*Symptoms.*—Severe pain is often caused by washing the parts, by the slightest touch with the finger, or even the end of a feather. We have seen patients who shrank from and complained bitterly of the pain produced by touching the sensitive part with a delicate sil-





ver probe. Severe cases never recover without skillful treatment ; some have been known to last many years or for life. Mild cases may be perfectly cured by simple remedies, or may even get well themselves.

There is no disease of which we have any knowledge competent to cause so much unhappiness in the marriage relation, and there are not many that can be cured with more safety or certainty.

*Treatment.*—If the patient be in good health local measures may be resorted to at once ; but if not, her physical condition must be improved by fresh air, exercise, sea-bathing, cheerful society, and the use internally of prescriptions 38 or 39.

38 R.	Citrate of iron and quinine.....	30 grains.
	Spirits of chloroform.....	1 dram.
	Syrup of orange peel.....	1 ounce.
	Water, to make.....	3 ounces.

Take one teaspoonful after meals.

39 R.	Hypophosphite of lime.....	1 dram.
	Phosphate of iron.....	20 grains.
	Dilute phosphoric acid.....	1 ounce.
	Whiskey... ..	1 ounce.
	Simple syrup.....	2 ounces.

Shake the bottle and take one teaspoonful after meals.

After some decided progress has been made in building up her health by the means indicated, one of the following preparations may be applied to the sensitive parts with great benefit.

40 R.	Solid extract belladonna.....	30 grains.
	Powdered opium.....	20 grains.
	Vaseline .....	1½ ounce.

Triturate together in a mortar.

For external use only.



41 R. Solid extract henbane.....60 grains.  
 Vaseline ..... 1 ounce.

Triturate together in a mortar.

For external use only.

42 R. Solid extract stramonium.....30 grains.  
 Vaseline..... 1 ounce.

Triturate together in a mortar.

For external use only.

At the same time a glass dilator should be gently inserted into the canal and kept there each day as long as possible. The size of the dilator should be progressively increased until an instrument one inch and a half in diameter can be tolerated without pain. Hot, shallow sitz baths are often very soothing, and materially assist in bringing about a cure.

In the worst cases, however, all medicinal treatment will fail, and a complete cure can only be attained by a delicate surgical operation ; to perform which an expert surgeon should be employed.

#### INFLAMMATION OF THE URETHRA.—URETHRITIS.

This disorder may exist either in the acute or chronic forms ; the latter variety is usually the result of an acute attack that has been neglected or improperly treated.

*Symptoms.*—The patient feels a constant burning pain in the urethra, which is greatly aggravated by passing water ; the urine seems to the sufferer as if it were almost boiling hot. Urination is always difficult ; in some it is impossible, because as soon as the fluid touches the diseased surfaces spasmodic contraction of the urethra takes place preventing the passage of a single drop. The orifice of the canal appears red,



swollen, and partly turned inside out. By examining the urethra through the anterior part of the vagina it can be felt about as large as the little finger, and very sensitive. At first there is no discharge, but soon a little mucus appears, followed in a day or two by a free discharge of yellow matter.

*Treatment.*—Rest in bed during the acute stage will be necessary. If the bowels are at all constipated, they may be moved by the following laxative.

43 R. Sulphate of soda .....  $\frac{1}{2}$  ounce.  
Ginger tea..... 2 ounces.

Dissolve the medicine in the tea, and take the whole at one dose.

If the patient be feverish, the following remedy will probably abate the temperature.

44 R. Tincture of aconite root..... 5 drops.  
Water..... 3 ounces.

Stir, and give one teaspoonful every thirty minutes until relieved.

In order to render the urine less irritating to the inflamed surfaces prescription 45 may be drank freely until relief be obtained.

45 R. Bicarbonate of potash.....  $\frac{1}{2}$  ounce.  
Dried broom tops..... 3 drams.  
Hot water..... 1 pint.

Infuse one hour; let it stand until cold.

Soft linen or old cotton cloths soaked in prescription 46 may be constantly applied to the part, using the infusion either warm or cold, as may be most agreeable to the patient.



- 46 R. Stramonium leaves.....2 drams.  
 Warm water.....1 pint.

Infuse thirty minutes, and strain.  
 For external use only.

Shallow warm hip baths are of great service. In a few days the above treatment shall have subdued the most acute symptoms, then injections into the urethra by means of a small glass or hard rubber syringe will complete the cure. For this purpose prescriptions 47 and 48 will do excellent service.

- 47 R. Sulphate of zinc.....12 grains.  
 Sulphate of morphia.....3 grains.  
 Soft water.....6 ounces.

Dissolve the medicines in the water.

- 48 R. Sweet milk.....4 ounces.  
 Powdered alum.....60 grains.

Dissolve the alum in the milk, then warm the mixture over the fire until the milk curdles without scorching. Strain out the curd, and use only the liquid portion for an injection.

#### URETHRAL CARUNCLES.

These are small excrescences growing at the edge of the external orifice of the urethra or on the smooth mucous membrane in the immediate neighborhood. They occasionally extend into the urinary passage, and have been known to grow at the neck of the bladder. Usually they are attached to the underlying surface by a broad base, but occasionally they hang by a narrow neck. The color varies from a deep pink to a brilliant scarlet.



The size of many urethral caruncles is not larger than that of a clover seed, but they are occasionally observed as large as a small grape. Sometimes they are entirely painless, giving the patient no sort of trouble, but more frequently they cause the most exquisite pain. The suffering is elicited by urinating or by any pressure on them, or by the motion of the parts in walking. Sometimes the pain is accompanied by a sort of bearing down feeling, by a frequent desire to make water, which is resisted because of the intense pain the act usually causes.

*Treatment.*—The only useful treatment that a patient suffering from these most painful growths can apply to herself is the use of prescription 49.

49 R. Dilute prussic acid..... 2 drams.  
 Sugar of lead . ....10 grains.  
 Vaseline..... 2 ounces.

Triturate in a mortar.

For external use only.

A bit of this ointment as large as a pea applied to the parts often affords great relief. If the pain be specially severe when urinating it may be greatly alleviated if not altogether prevented by causing the sufferer to sit in a warm hip-bath during the act.

If the above measures do not effect a cure nothing but a surgical operation will be successful.

These disorders are not unfrequently overlooked by medical men and the general symptoms they cause attributed to other sources even when the local suffering endured by the woman should promptly direct attention to the real difficulty and lead at once to its detection.

To illustrate this point, we shall cite the following case :—



A lady, aged about fifty-five years, placed herself under the care of a physician in whom she had perfect confidence. Her local suffering was so great that it had developed a remarkable series of nervous symptoms which finally became so violent as to lead her friends to believe she was about to become insane : an opinion that was strengthened by the fact that insanity existed in the family ; her sister having died insane about two years before.

During eight months she was treated by internal remedies intended to remove the nervous manifestations ; but as the local cause of these received no attention she grew steadily worse. When her case seemed hopeless she came under the author's care who examined the site of the pain, discovered a very large and excessively sensitive urethral caruncle, which was removed ; after the operation all her difficulties quickly disappeared.

#### INFLAMMATION OF THE VAGINA.—ACUTE VAGINITIS.

The vagina is lined by a very tough and sensitive mucous membrane which is thrown into minute creases extending around the passage like rings. This lining membrane is the seat of the disease under consideration. The books divide vaginitis into many varieties ; but unnecessary refinement is opposed to the scope of this work. We shall, therefore, include all varieties under the acute and chronic forms of the disease.

*Causes.*—Acute vaginitis may arise from cold and wet, but both together are specially effective. It may be caused by violence, by the irritation due to pessaries. Sometimes it is due to uncleanness, the retention of decomposing secretions. Occasionally it is excited by the powerful caustics sometimes applied to the uterus in diseases of that organ.



*Symptoms.*—A sensation of heat, fullness and throbbing is felt in the canal ; at first the parts are dry, the natural secretion being arrested ; but soon there is observed a discharge resembling thin half boiled starch : this gradually changes its character until it becomes quite yellow, consisting mainly of pus and mucus. There is a desire to make water very often, accompanied by a scalding pain while doing so. Sharp pains shoot through the loins, the labia are swelled, and the mucous membrane of the vulva irritated by the acrid discharges. The vagina is hot, sensitive and preternaturally red. Unless removed by treatment the acute symptoms pass off measureably in from ten to fourteen days. When the disease assumes the chronic form it may continue for years. The inflammation often creeps up gradually until the urethra and womb are invaded.

*Treatment.*—The fever accompanying the acute stages of vaginitis may be effectually relieved by the following prescription :—

50 R. Tincture of aconite root..... 5 drops.  
 Tincture veratrum viride.....10 drops.  
 Water..... 4 ounces.

Stir well and give one-half teaspoonful every half hour until the fever abates.

Every fourth hour she should get out of bed and sit over a large vessel and have the following remedy thrown into the passage in a steady stream either by a Davidson or a fountain syringe.

51 R. Slippery elm bark powdered.....2 ounces.  
 Hot water.....3 quarts.

Infuse one hour and strain, then add one ounce tinc-



ture of opium, and use the mixture as hot as the patient can comfortably bear it.

After the severest symptoms have been subdued the following preparations will be be very useful :—

52 R. Sugar of lead.....1 dram.  
Infusion of slippery elm..... 3 quarts.

Dissolve the medicine in the infusion, and use the whole for one injection while it is hot.

53 R. Acetate of zinc.....1 dram.  
Infusion of slippery elm.....3 quarts.

Dissolve the medicine in the infusion, and use the whole for one injection while it is hot.

54 R. Sulphate of zinc.....1 dram.  
Infusion of slippery elm.....3 quarts.

Dissolve the medicine in the infusion, and use the whole for one injection while it is hot.

If there be severe scalding in making water the sufferer should drink freely of the following preparations :—

55 R. Marsh mallows.....1 ounce.  
Warm water.....1 quart.  
Infuse one hour, strain and add bicarbonate of  
potash.....1 dram.

To be drank freely when cold.

56 R. Cleavers.....2 ounces.  
Warm water.....1 quart.  
Infuse one hour and strain; add bicarbonate of  
potash.....1 dram.

To be drank freely when cold.

In a short time the cure may be apparently complete, but the treatment must not be discontinued until the disease be totally eradicated, or it will speedily assume



the chronic form and continue in this state for months or years.

Therefore, as soon as the pain and tenderness of the passage have quite subsided the following stronger injections may be used with excellent effect :—

57 R. Sulphate of zinc.....1 or 2 drams.  
Tepid water.....1 quart.

Dissolve the remedy in the water and use the whole for one injection.

58 R. Acetate of lead.....1 or 2 drams.  
Tepid water.....1 quart.

Dissolve the lead in the water and use the whole for one injection.

The above washes should be used twice a day at first, and after notable improvement has been obtained, once a day will rapidly complete the cure. To improve the quality of the blood and prevent the disorder returning, prescription 59 will be of much service.

59 R. The ammonio citrate of iron.....40 grains.  
Fowler's solution.....30 drops.  
Syrup of ginger.....1 ounce.  
Tincture calumba.....2 drams.  
Water, to make.....4 ounces.

One teaspoonful after each meal.

#### LEUCORRHEA.

This disorder consists of a discharge of varying consistence and appearance. It is known by various names, fluor albus, the whites, and the name at the head of this article. No disease or symptom of disease peculiar to women is so common as this. Probably no woman goes through life without at some time suffering



more or less from it, a fact that need not surprise us, when we consider the many causes operating to irritate and disease the vagina. When the discharge is of a temporary character, and not accompanied by other symptoms than the excretion of a bland fluid, it is not necessary to do anything but give increased attention to cleanliness. But when the discharge is constant and copious, and especially if it possesses acrid qualities, it becomes a disorder requiring prompt and careful treatment.

Leucorrhœa has been very properly divided into vaginal and uterine; according as the discharge issued from one or the other of these organs. We shall deal here only with the former, leaving the latter for consideration when discussing diseases of the womb.

Vaginal leucorrhœa frequently exists alone, but where disease of the inside of the womb is present, the acrid discharge issuing from it and flowing down over the mucous membrane, causes the latter to become speedily diseased and to pour forth a more or less copious leucorrhœa.

*Causes.*—These are very numerous. A chronic leucorrhœa may result from an improperly treated attack of acute vaginitis; it may be a local expression of a debilitated condition of the system generally; it is sometimes caused by exposure to cold or wet when the health is in a low condition; leucorrhœa is often the result of miscarriages or too frequent child-bearing. Pessaries intended to keep the uterus in place rarely accomplish this object, while they always excite leucorrhœa sooner or later. Disordered menstruation, piles, and habitual constipation are sometimes at the root of the difficulty.



*Symptoms.*—When a vaginal leucorrhea is copious and long continued, it produces sooner or later general symptoms of more or less gravity. The patient usually loses flesh and always becomes weaker, her muscles becoming soft and flabby. The complexion assumes a dingy hue, the eyes sunken and lustreless, and dark circles form around them. A dull aching is often felt down the thighs.

Pressure over the ovaries shows they are sensitive. There is often a row of tender spots all the way down the spine, and a little exercise makes the lower part of the back ache severely. Many women who have leucorrhea suffer from annoying sensations at the crown of the head, described by some as a feeling of heat, by others as a dull pain or a sort of tingling.

Occasionally the hair on that part of the head falls off or becomes harsh and dry.

*Treatment.*—From what has been said, it is obvious the means of cure naturally divide themselves into two sorts, remedies intended to restore the general health and local applications to the diseased surfaces. If the patient be pale, bloodless, and sallow, prescription 60 will be of very great service.

60 R.	Phosphate of iron.....	30 grains.
	Phosphate of manganese.....	30 grains.
	Dilute phosphoric acid.....	$\frac{1}{2}$ ounce.
	Elixir of Peruvian bark.....	2 ounces.
	Simple syrup.....	$1\frac{1}{2}$ ounces.

Shake the bottle, and take one teaspoonful after meals.

Injectons are of such signal temporary service, that the patient is apt to over-estimate their value and to



trust too implicitly to them. A permanent cure, however, can never be attained by any vaginal injections, however effective, independent of proper constitutional means. Remedies of this class should consist of not less than one quart of liquid; the first portion is expended in cleansing the diseased mucous membrane of the genital canal, and the latter is thus enabled to come into curative contact with the diseased surfaces. Prescriptions 61, 62, and 63 are very valuable injections.

- 61 R. Powdered golden seal.....4 ounces.  
 Bicarbonate of potash.....3 ounces.  
 Boiling water.....1 gallon.

Infuse in a warm place one hour; let it stand until cold; strain and use a quart for one injection.

- 62 R. Creosote.....30 drops.  
 Liquor potassa.....1 dram.  
 Tepid water.....3 pints.

Mix thoroughly and use the whole for one injection.

- 63 R. Geddes' fluid extract hemlock.....2 drams.  
 Tepid water.....1 quart.

Mix thoroughly and use for one injection.

After the patient has taken one four-ounce vial of prescription 64, she should take prescription 65 as a uterine tonic until the cure be complete, at the same time continuing one or the other injection as may be required.

- 64 R. Tincture perchloride of iron.....2 drams.  
 Compound tincture of lavender.....6 drams.  
 Spirits of chloroform.....1 dram.  
 Syrup of orange peel.....1 ounce.  
 Water to make.....4 ounces.

Take one teaspoonful after meals.



- 65 R. Fluid extract unicorn root.....2 ounces.  
 Fluid extract life root.....2 ounces.  
 Fluid extract star grass.....1 ounce.

Half teaspoonful in water one hour after meals.

If the disease does not yield readily, better results will be attained by changing the injection occasionally; any one wash when continued too long is apt to lose its curative effects. Finally, the skin should be restored to and kept in a healthy condition by Turkish baths or tepid salt water baths, the latter containing a suitable proportion of Ditman's sea salt.

#### SPECIFIC VAGINITIS.—GONORRHOEA.

This disease consists of an acute inflammation of the mucous membrane lining the vulva and vagina: the urethra may or may not be coincidently affected. It is caused by a specific virus coming in contact with the parts. The poisonous matter, after being in contact with the sides of the passage, excites therein an inflammation accompanied by the ordinary symptoms of heat, pain, swelling, and a very copious irritating discharge of ichorous yellow matter. This disease very strongly resembles simple inflammation of the vagina, except that the symptoms of the former are much more violent.

*Symptoms.*—The disease does not usually declare itself until from three to six days after exposure. There is a sensation of heat, tumefaction, and throbbing in the parts. At first, the vagina is unnaturally dry, but in a short time a secretion, at first clear and glairy, like the white of an egg, or opalescent, resembling thin half boiled starch, pours forth; as the disease progresses the discharge becomes thick, yellow and creamy. There



is a desire to pass water very frequently accompanied by painful scalding. Pains through the loins and a sense of weight in the perineum distress the sufferer. The labia are usually swelled and their mucous membrane excoriated. The vagina is extremely sensitive, feels hot, is unnaturally red, and its surface covered by small shallow ulcers. The acute symptoms pass off in from ten to fourteen days even if not relieved sooner by treatment, leaving a chronic vaginitis that may continue for years. In the chronic condition the inflammation is apt to creep up to the inside of the womb, or even through the Fallopian tubes into the peritoneum. Very frequently the bladder is invaded through the urethra.

*Treatment.*—The treatment for the specific and simple forms of vaginitis is precisely the same—the remedies requiring to be varied only to meet the varying severity of the symptoms. The reader is therefore referred to the article on the latter subject for the necessary information on this point.

#### PROLAPSUS OF THE VAGINA.

The vagina is closely connected with the rectum behind, the bladder in front, and with the womb at its upper extremity. The tonicity of the vaginal walls in health is such that they assist materially in keeping the adjacent viscera, particularly the uterus in position.

Downward displacement of the vagina has been divided into several varieties, which is all very well in technical works, but are out of place in a practical book for popular use. Thus, when the posterior wall bulges forward, it is called rectocele; when the anterior wall drops down into the passage it is called cystocele,



because the base of the bladder descends; and when the whole canal suffers prolapse it is very properly known as prolapsus of the vagina. We shall consider these several displacements under the latter head.

*Causes.*—Whatever increases the weight which the vagina has to support, or impairs the tonicity of its walls, predisposes to this disorder. During pregnancy and child-birth the passage undergoes great development, the weight of the uterus is enormously increased, and at delivery the parts are distended to the utmost. We therefore find that although this affection has been observed in women who have never borne children, it almost always occurs in those who have frequently been mothers. The predisposing causes having operated to debilitate the parts, a severe muscular effort may produce a prolapse of the vagina; or it may be forced down and doubled on itself by an enlarged and heavy womb. The wearing of pessaries or the pressure of tumors may bring about this result; or long continued inflammation of the vagina may cause it to prolapse. Obstinate constipation necessitating severe straining at stool is competent to bring about the same result. Displacement of the vagina may occur suddenly by some violent effort, or take place slowly by the steady action of some one of the causes enumerated. A sudden prolapse is readily and perfectly cured by proper means, but the variety that comes on slowly requires longer time, and the final cure is more difficult.

*Symptoms.*—The patient complains of weight and fullness in the vagina as if it contained some heavy foreign body; there is a feeling of heat and throbbing, walking or making any muscular effort is exhausting; in aggravated cases of long standing the general health gives way.



If the bladder be dragged down there will be difficulty in making water, accompanied sooner or later by disease of that viscus, because under the circumstances it cannot be completely emptied; the urine that remains decomposes and excites inflammation. If the posterior wall of the vagina be the part affected, a pouch filled with hardened matter forms and projects into the vagina; these matters being retained, as in a bag, cannot escape by the natural outlet; sooner or later their presence causes inflammation, severe bearing down distress, obstinate constipation, piles, and a discharge of mucus.

*Treatment.*—If the prolapsus has occurred suddenly because of some violent effort or injury, the parts cannot be replaced too quickly. To accomplish this more readily the patient should be placed on her knees and elbows, the pelvis is thus elevated and the favoring influence of gravity secured; gentle but firm pressure should now be made on the protruding parts until these be replaced. To prevent a relapse the patient should be kept in bed. By placing her on her hands and knees while urinating, the bladder may be emptied perfectly and with comparative comfort.

The bowels should be moved without straining, either by some stimulating enema or by a dose of prescription 67, taken every night before retiring.

67 R.	Powdered senna leaves.....	2 drams.
	Powdered licorice root.....	2 drams.
	Powdered anise seed .....	1 dram.
	Sulphur ....	1 dram.
	Powdered white sugar.....	1 ounce.

Mix the powders thoroughly and take one teaspoonful dry on the tongue, and then wash it over with a mouthful of water.



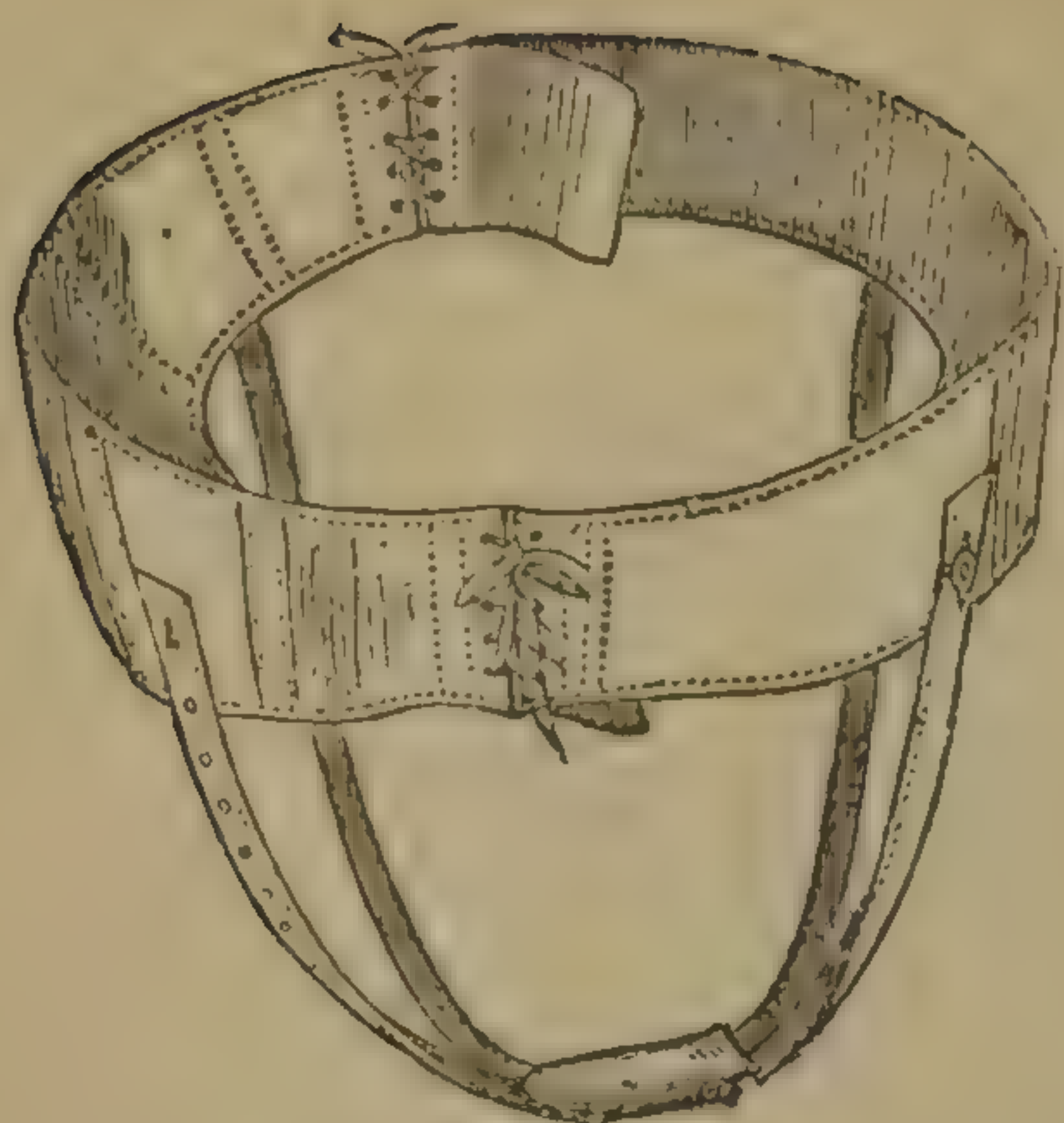


Fig 5.

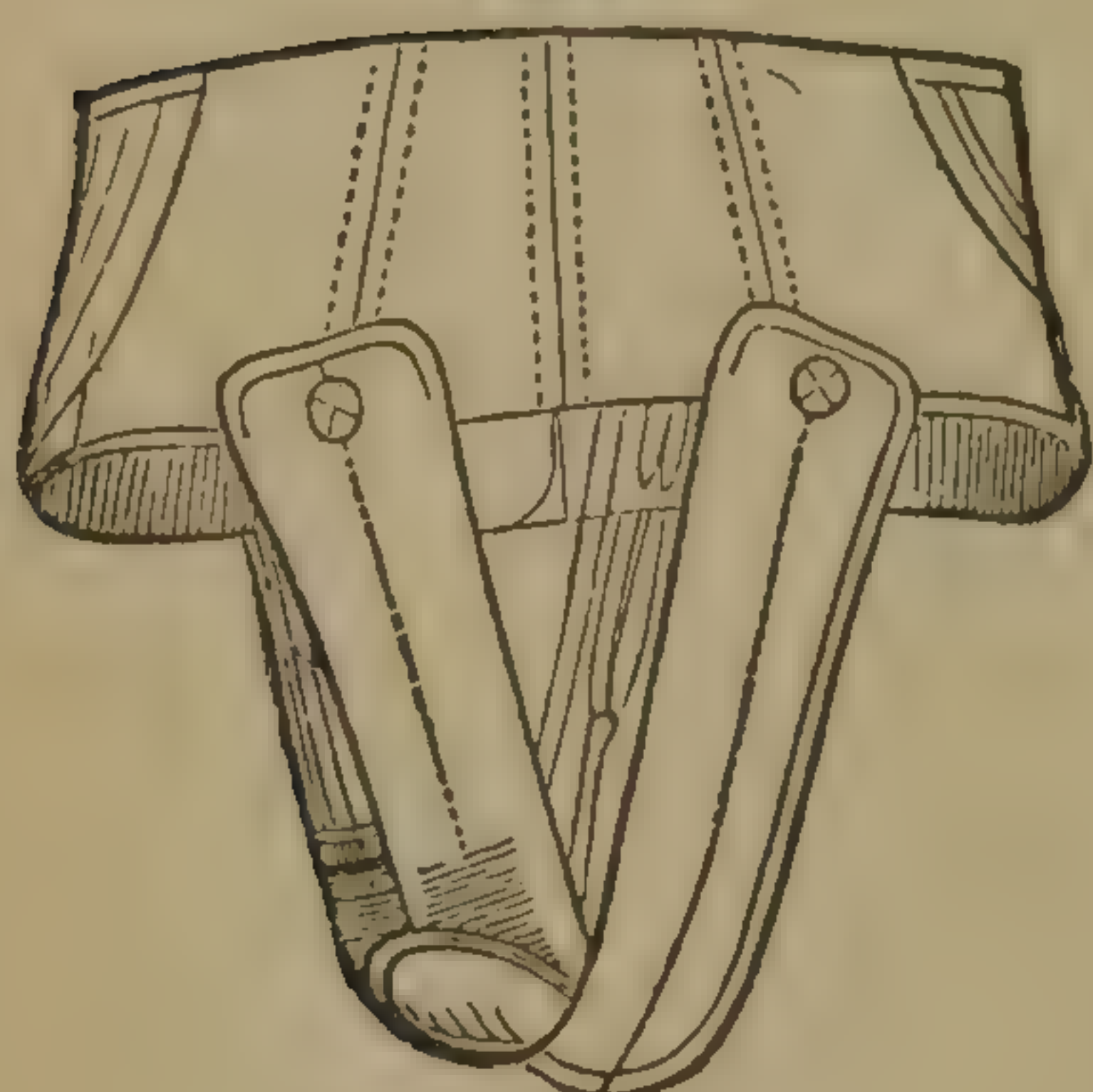


Fig. 6.

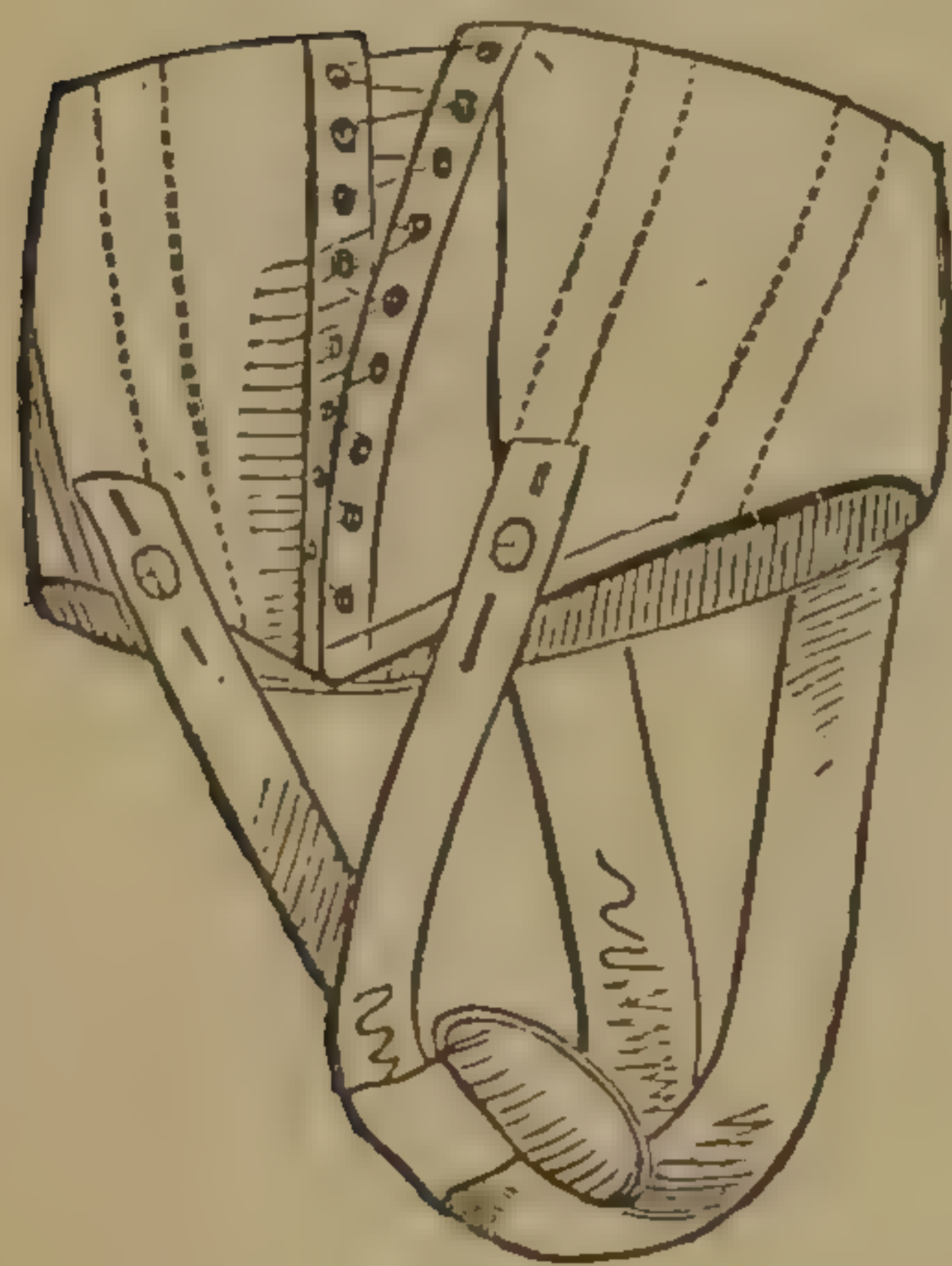


Fig 7.

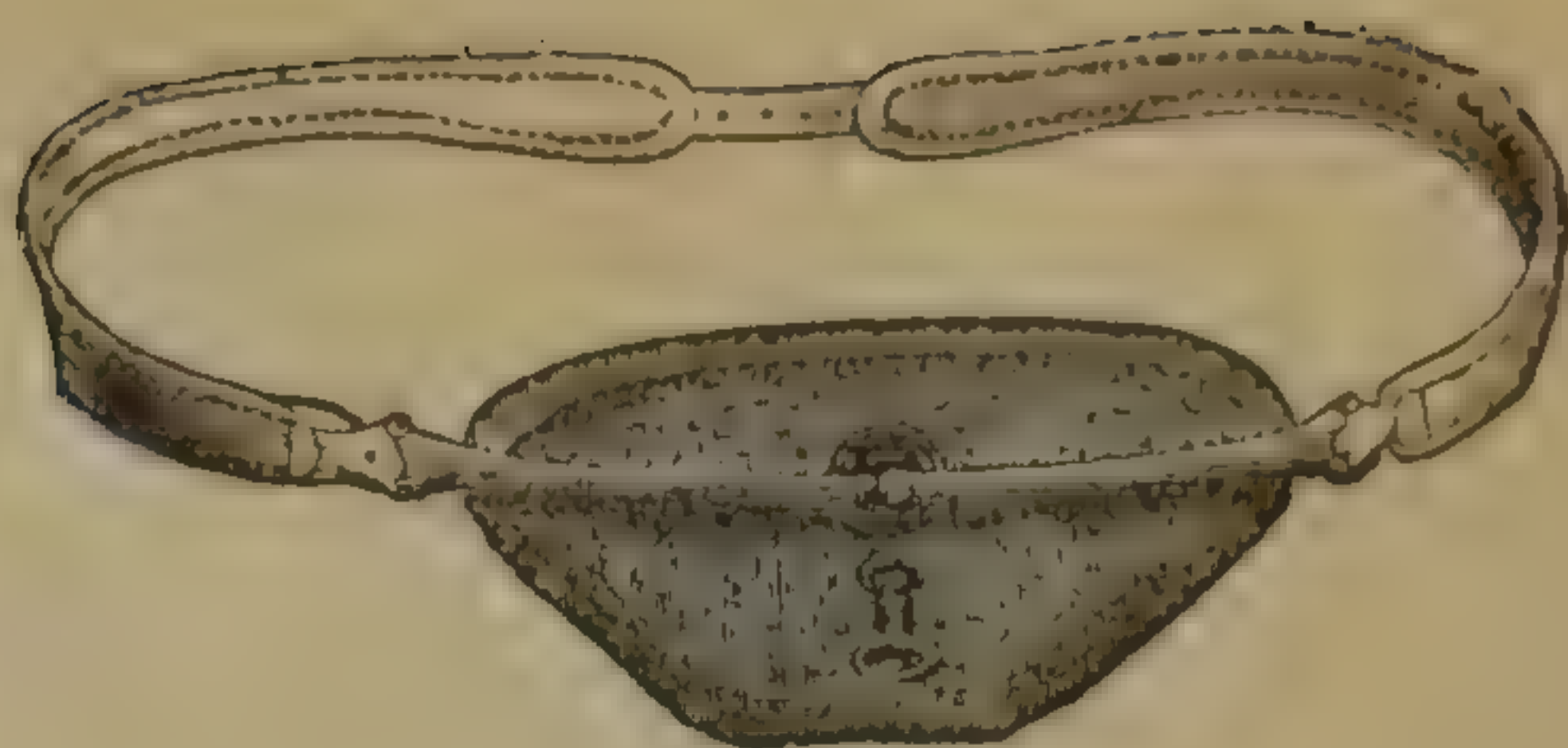


Fig 8.



Fig. 9.

FIGS. 5, 6 and 7. Are representations of abdominal supporters of the simplest, but most effective sort. No 7, having a wide waistband which descends low down in front, is especially adapted to the use of stout ladies whose abdominal and generative organs are both inclined to prolapsus.

Any of these instruments may be worn either with or without the straps that descend from the waistband and cross between the limbs, according as the patient does or does not suffer from prolapsus of the womb.

When the bowels are lifted up, the womb is naturally inclined to rise into its proper place; when to that is added the effective support afforded the external parts by the straps, ladies will find that falling of the womb will often be cured with little or no further treatment.

FIG. 8. Is a supporter consisting of a pad held in place by a steel spring. It is specially useful in cases where we must deal with large tumors of the womb or ovaries.

FIG. 9. Indicates how supporters should be applied.



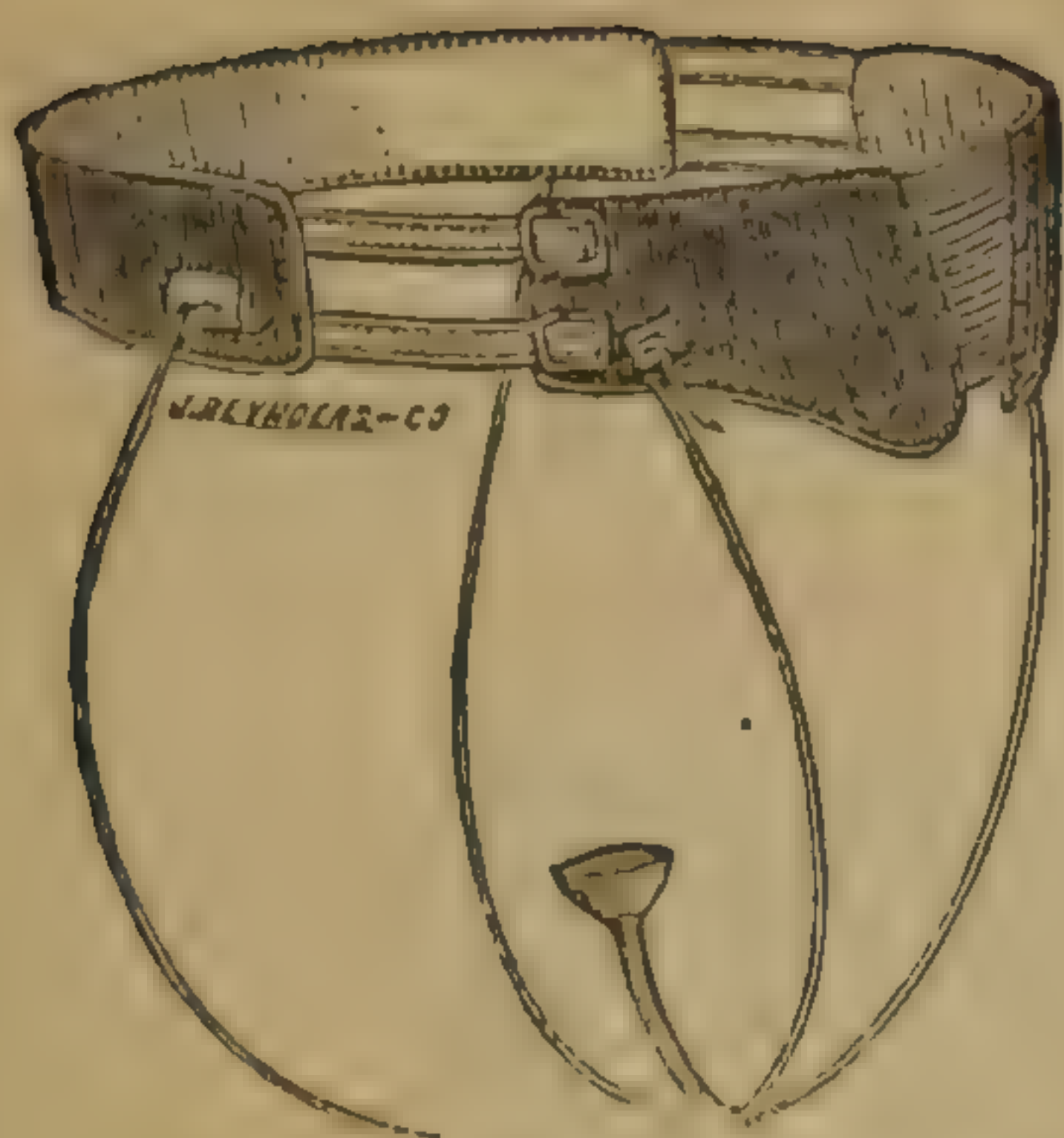


Fig. 10.

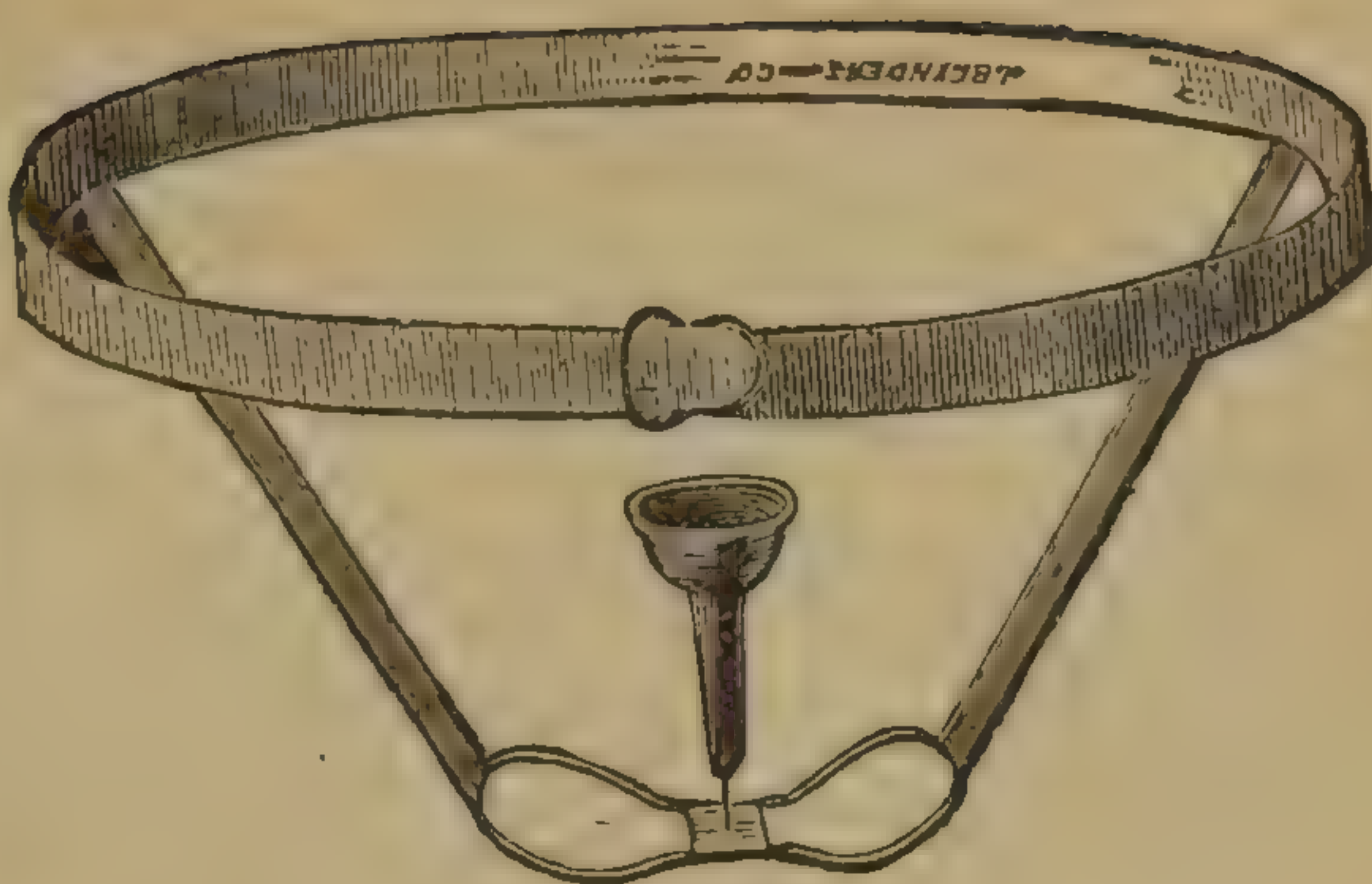


Fig 11.



Fig 12.

FIGS. 10 and 11. Are cuts of pessaries intended to elevate the prolapsed womb by support supplied from without. A band passes around waist; jean straps or small elastic rubber tubing descend from the waist-band and cross between the limbs. At the point of crossing, the stem of a uterine cup is attached, which, passing into the vagina, raises the womb to its proper place.

FIG. 12. Shows a Gariel pessary in position. It consists of a soft rubber ball, which is to be distended with air after it has been placed in position. *C* is the bladder, *A* is the womb, *D* is the pessary supporting it from below, *B* is vagina.

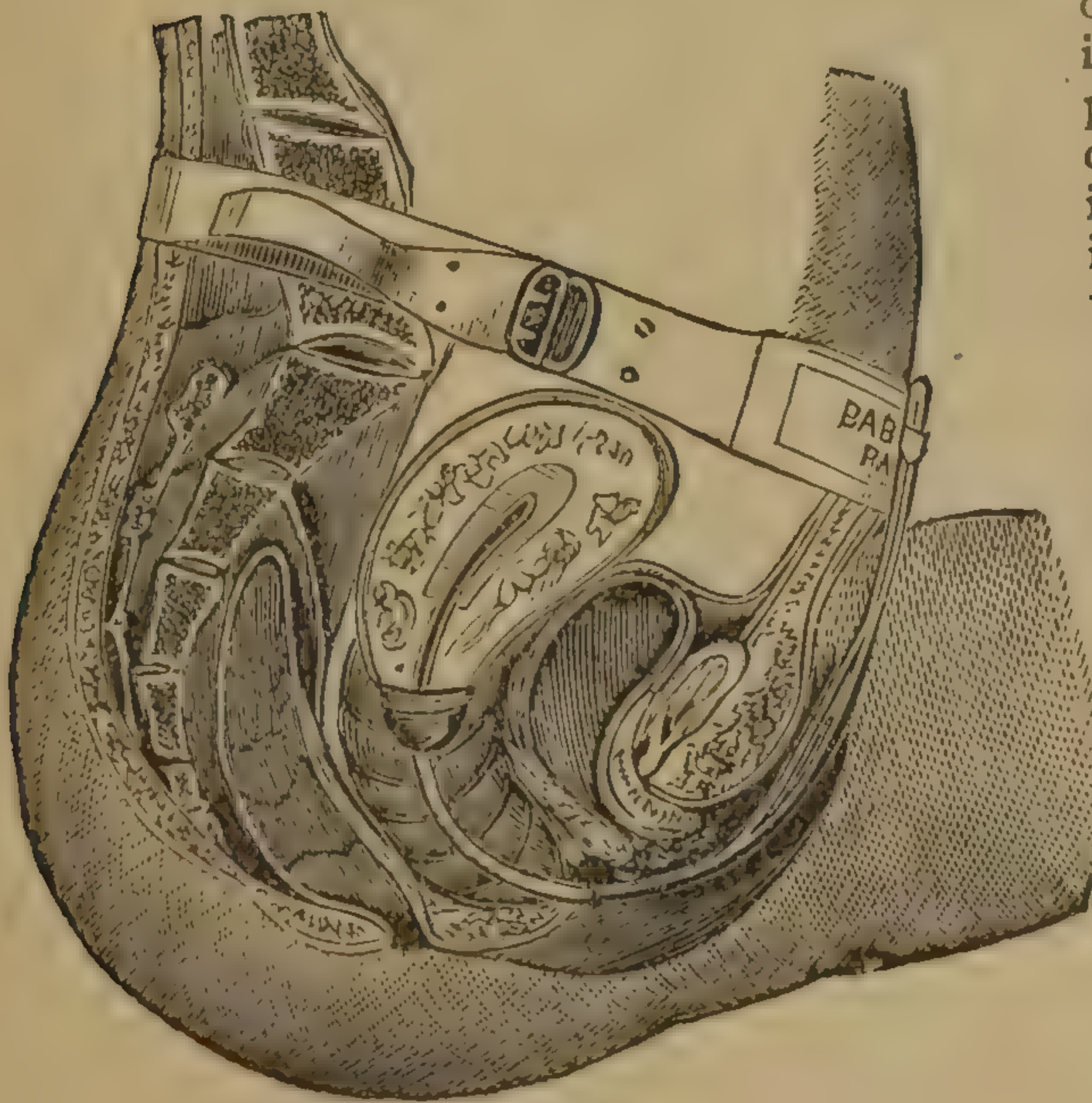


Fig. 13.

FIG. 13. Represents a Babcock pessary. It consists of a waist-band from which descends a silver stem, having a cup on the end, which, passing into the vagina by the front, receives the neck of the womb and supports the whole organ as high as may be desired.



Prescription 68 may be used as a vaginal injection twice a day to impart tone to the walls of the genital canal. By these means a cure may be attained.

68 R. Tannin .....	$\frac{1}{4}$ ounce.
Glycerine .....	3 ounces.
Tepid water.....	2 pints.

Mix thoroughly, and use the whole for one injection. This wash will stain linen.

The successful treatment of severe chronic cases requires more prolonged and comprehensive measures. In these cases the clothing should be supported from the shoulders by some suitable device: no pressure being permitted on the hips or abdomen. The prolapsed parts should be replaced within the pelvis and retained there by introducing a soft rubber ball pessary known as Gariel's. An abdominal supporter may be worn to keep up the contents of the abdomen, and prevent them pressing down too heavily into the pelvis.

The soft rubber pessary should be removed night and morning, and one gallon of cool salt water injected into the passage.

After the morning injection the pessary should be replaced for the day: but after removing it for the night it need not be replaced until the next morning. If the vaginal orifice be too large the pessary will not remain in the passage. Under these circumstances straps should be attached to a wide belt around the waist, back and front and made to cross each other at the vaginal opening; when these are applied properly, displacement of the pessary cannot occur.

Dr. Livingston's abdominal supporter does excellent service in such cases.



Medicated balls, made according to prescriptions 69 and 70, may be introduced into the genital canal and allowed to dissolve during the night.

69 R. Tannin .....2 drams.  
Cocoa butter.....1½ ounces.

Melt the butter and the tannin together and divide the mass into 12 suppositories. One may be used every night before retiring.

70 R. Powdered dried alum.....2 drams.  
Cocoa butter.....1½ ounces.

Melt the butter and the alum together and divide the mass into 12 suppositories. One may be used every night or every alternate night before retiring.

By these means a cure may usually be effected. If any case should resist the above treatment, a surgical operation will be required to attain the best results.

#### CONGESTION OF THE NECK OF THE WOMB.

At every menstrual period the blood flows in largely increased quantities to the womb, the blood-vessels in its walls dilate, and it becomes heavier. The visible portion of the uterine neck projects down into the vagina ; if it be examined during or just before the menstrual period, it will be found larger, softer, and of a deeper red color than at other times. A perfectly natural and necessary congestion of the uterus is thus temporarily established. In two or three days after the flow ceases to appear externally this condition completely disappears, but when from any cause it is unnaturally prolonged or increased, it becomes the starting point of many severe uterine disorders.



*Causes.*—The congestion of the womb that exists normally at every menstrual period may be quickly carried into the domain of disease by any influence that either unduly increases the flow of blood to the womb at this critical time, or prevents the natural outflow from it. Walking, dancing, skating, and muscular exercise generally during menstruation act by causing an unusual determination of blood to the womb. While cold and wet act by promptly stopping the flow from the womb, causing in either case abnormal congestion.

When these adverse conditions act on the uterus month after month the natural periodical congestion becomes increasingly prolonged until it extends from one menstrual period to another ; when this is the case the disease under consideration may be said to be established.

*Symptoms.*—These are not usually very well marked at first, as the disorder comes on insidiously, but if the disease-producing causes continue to act, menstruation becomes more or less painful, sometimes very severe pain is experienced at the menstrual periods. The flow becomes either too profuse or too scanty, appearing every two or three weeks, or is delayed for five or six. The patient suffers from a dull aching in the lower part of the back, and a bearing down sensation through the pelvis, both of which are notably increased by too much walking or standing. A leucorrhœal discharge appears of varying character, in some cases it is clear and glairy like the white of an egg, sometimes it strongly resembles half boiled starch, and in advanced cases consists of tough, opaque, yellow matter.

In course of time the local disease unfavorably affects the general health, and the woman will lose flesh and



complain of debility, diminished powers of endurance, irritability, nervousness, loss of appetite, and sometimes nausea.

*Treatment.*—Although congestion of the neck of the womb, when recognized in time and properly treated, is easily cured, still it is a very important disease, not because of its own inherent gravity, but because when it is neglected it becomes the starting point of several very rebellious disorders. As the upright position, standing or walking, increases the flow of blood to the diseased womb, the patient should lie down as much as possible during the menstrual period. The clothing should be supported from the shoulders so that none of the weight presses unduly on the abdomen. The skin should be kept in active condition by baths, the feet and limbs warmly clothed and carefully protected from the wet. If the patient be weak, bloodless, and without appetite, prescription 71 will be of great service.

71 R. Tincture of muriate of iron..... 3 drams.  
Sulphate of quinine.....20 grains.  
Tincture of nux vomica..... 2 drams.  
Glycerine ..... 1 ounce.  
Water to make..... 4 ounces.

One teaspoonful in water after meals.

This remedy is to be taken preferably through a tube.

After taking one or two bottles of the above iron tonic, the use of prescription 72 or 73 may be used as a uterine tonic.

72 R. Fluid extract false unicorn root..... 3 ounces.  
Fluid extract scullcap.....  $\frac{1}{2}$  ounce.  
Glycerine.....2 $\frac{1}{2}$  ounces.

Mix. Take one teaspoonful one hour after meals.



73 R. Compound syrup of partridge berry.....4 ounces.

One dessertspoonful after meals.

The influence of the preceding remedies in imparting tone to the uterus, removing congestion, and preventing all the evil consequences arising from this diseased condition, is very powerful. In order to secure the direct effects of a local application at the same time, the following prescription may be used :

74 R. Powdered blood-root.....1½ drams.

Powdered gum myrrh..... 2 drams.

Powdered genitan..... ½ ounce.

Powdered gum Arabic... .. 1 dram.

Mix the powders thoroughly, and make the whole into a stiff dough with glycerole of starch. Divide into thirty suppositories. Place one against the neck of the uterus every alternate night, and wash it away next morning by an injection of warm water.

The patient's diet should be plain, nutritious, and digestible. Spices, hot, stimulating sauces and spirituous drinks of every kind must be avoided. The bowels should be kept soluble by enemata or by the following pill :

75 R. Four-grain aloes and myrrh pills of U. S. Pharmacopeia.

One pill at night.

#### INFLAMMATION OF THE NECK OF THE WOMB.

This disease consists of an inflammation of the membrane lining the neck of the womb and that covering the part projecting down into the vagina. Several divisions of the disorder are made by specialists ac-



according to the part of the uterine neck that may be affected; but these are unnecessary refinements unsuited to a work for popular use. We shall, therefore, simplify the subject as much as possible by describing all these under one appropriate head. When simple congestion goes on from bad to worse, sooner or later it assumes the form of active inflammation. But there are other causes that excite uterine inflammation directly without the intervention of the congestive stage.

Of all the diseases affecting the female genital system there is no question but that this is by far the most frequent. And when we consider the numerous causes acting in this direction we cannot be surprised at the result.

*Causes.*—When the womb occupies the natural position in the pelvis its neck does not suffer undue friction, but when it is displaced downward far enough from any cause so that the lower end of the neck rests on the muscular parts beneath, it necessarily endures severe pressure with friction while the woman is walking; the neck of the uterus soon becomes inflamed in precisely the same way a like morbid action is excited in any part of the foot when it is subjected to the rubbing and squeezing of a tight shoe. Pessaries, intended to support the womb when displaced, injure it in the same manner, and with the same results.

Efforts to prevent conception and produce abortion are a most fruitful cause of inflammation of the lower segment of the womb. Exposure to cold and wet may cause it at any time in delicate women whose health is disordered. But these influences are specially potent during or near the menstrual period. The membrane covering the neck of the womb may become diseased



by an inflammation spreading to it from an inflamed vagina. Finally, it is not unfrequently the result of badly managed child-birth.

*Symptoms.*—It is truly surprising how very differently patients laboring under inflammation of the neck of the womb are affected by it. Some who have the disease very moderately are greatly distressed. Others, in whom it has made scarcely more progress, suffer very seriously; this depends largely on the state of the patient's nervous system. One of the first symptoms that attracts attention is usually a heavy dragging feeling through the loins, accompanied by back ache and pain down the thighs. Leucorrhea is present of very much the same character that proceeds from simple congestion, except that the discharge due to inflammation is of so acrid a character that it irritates the mucous membrane lining the vagina and vulva. Menstruation becomes disordered and often painful; the general health gives way, and in time the numerous and distressing symptoms grouped under the head of nervousness are developed. In some cases complications arise slowly, but in others they may be speedily excited. The inflammation, which at first is confined to the mucous membrane covering the neck, spreads to that lining the womb; or the muscular structure forming the bulk of the organ may become involved. The bladder becomes involved, and the rectum irritable in a few cases. There is almost always disturbance of the digestive functions, sometimes accompanied by sympathetic vomiting. The skin grows harsh, dry, and rough, the kidneys and bowels are disordered, and the suffering woman becomes pale, weak, listless, nervous, and often hysterical.



As the inflamed womb is usually lower down in the pelvis than it ought to be, it is readily reached. If the finger be placed under it and pressed upward, a sharp pain will be felt, the neck is swelled, and the mucous membrane covering it is rough and granular.

*Treatment.*—As the suffering caused by the disease under consideration is often quite moderate at first, women often defer treatment until it is well advanced. If properly treated at the beginning, it could often be cured by themselves at home. If the patient's general health be good, the local treatment is the most important, if not, means adapted to improve the vital stamina are necessary before the local disease can be subdued. Sea bathing at the proper season, or salt water baths at home, made of Ditman's sea-salt, with vigorous friction by an assistant, will be of service in exciting the skin to healthy action and in drawing away the blood from the womb to the surface of the body. As general tonics, prescriptions 76 or 77 will be of much service. Under their influence the appetite and complexion usually improve rapidly.

76 R. Soluble citrate of iron.....30 grains.

Water ..... 2 ounces.

Dissolve the iron in the water, and add

Glycerine..... 1 ounce.

Whiskey ..... 1 ounce.

One teaspoonful after meals.

77 R. Fluid extract golden seal..... 1 ounce.

Fluid extract prickly ash berries..... 1 ounce.

Bitter wine of iron..... 3 ounces.

Catawba wine..... 3 ounces.

Shake the bottle, and take one or two teaspoonfuls before meals.



When the general health has been decidedly improved by the use of these remedies, then uterine tonics to invigorate the womb, and to assist in removing local congestion and inflammation, should be used instead of the above. For these purposes prescriptions 78 and 79 will prove valuable.

- 78 R. Fluid extract life root.....2 ounces.  
 Fluid extract star grass.....2 ounces.  
 Fluid extract golden seal.....2 drams.

Half teaspoonful in water one hour after meals.

- 79 R. Compound syrup of partridge berry.....6 ounces.  
 Fluid extract prickly ash berries..... $\frac{1}{2}$  ounce.

One dessert spoonful after meals.

Walking or other exercise in the open air, short of fatigue, should be had daily when the weather permits. The clothing must be worn loosely around the waist, the whole weight being supported from the shoulders by a suitably adapted waist. The diet must be plain, but very nutritious, no stimulants, spices, or hot sauces should be used. Oatmeal, fruits, hominy, cracked wheat or graham bread should enter into daily diet, in order to regulate the bowels without medicines, if possible. Local treatment should be commenced at the same time and continued along with the means intended to bring up the general health. Perfect cleanliness is of very great importance; the acrid discharges should never be permitted to remain in the passage and about the inflamed neck of the womb any longer than can be avoided, because if they do remain and decompose, the local irritation will be greatly aggravated.

Vaginal injections, consisting of three or four quarts of warm water, should be thrown into the passage and



over the neck of the womb at least twice a day. Warm water is not only a valuable cleansing agent, it also favorably affects the local disorder. After the diseased surfaces are perfectly cleansed, medicated injections will be able to act more promptly on the inflamed but clean surface. In fact, a curative impression cannot be made on a surface covered by a varnish of tough yellow matter. Caustic injections are to be avoided. Vegetable injections, prepared after prescriptions 80 and 81, will prove very serviceable.

- 80 R. Powdered black snake root.....2 ounces.  
 Powdered cranesbill root.. ..2 ounces.  
 Boiling water.....4 pints.

Infuse one hour in a warm place; strain and use one pint as an injection.

- 81 R. Powdered smooth sumach bark.....2 ounces.  
 Powdered blood root..... $\frac{1}{2}$  ounce.  
 Boiling water.....3 pints.

Infuse one hour, and strain. Use one pint as an injection.

If the leucorrhea be profuse, better results will be secured by cleansing the passage by a copious lavement of tepid water before using the medicated injection. By the diligent use of the above treatment, excellent results may be attained.

#### ACUTE INFLAMMATION OF THE INSIDE LINING OF THE WOMB.

This affection occurs very frequently. Like other acute diseases it is self-limited, ending in a few days or weeks either in recovery, or the acute stage passes off



giving place to the chronic condition, that may and often does continue for years. The disease may affect the membrane lining the neck of the womb only, or the body alone, or the whole mucous lining may be diseased.

In technical works these are described as different disorders, but as the treatment is the same we shall not perplex our readers with distinctions foreign to the present purpose.

*Causes.*—Exposure to cold and wet, bathing, sitting on damp ground, harassing mental anxiety, or any other influence that suddenly arrests the menstrual flow, are the most frequent exciting causes. Aside from menstruation it occurs rarely, although it may be, and sometimes is excited by direct injuries, or by acute inflammation, spreading from the vagina to the inside of the uterus.

The mucous membrane lining the womb, often becomes inflamed in the course of scarlet fever, smallpox, measles, and diphtheria; in the same way and through the same poisoned blood by which the membrane lining the throat is affected. Finally it occurs not unfrequently after the confinement of women who have been previously in bad health.

*Symptoms.*—In some cases the disease begins with a chill succeeded by fever, in the course of which the pulse becomes frequent; the skin hot and dry, the feet cold, the face flushed, bowels constipated, the tongue coated, with severe headache and restlessness.

The sufferer will complain of weight and pain, with a dragging feeling through the loins and in the womb. Pain is often specially severe at the very lowermost part of the abdomen, radiating toward the groins and



back, and sometimes shooting down the thighs. The bladder and rectum are irritable, and the sufferer may be distressed by an ineffective desire to go to stool; and if the bowels are moved the attempt aggravates all the symptoms for the time being.

- The abdomen often swells up and is sensitive to pressure. After three or four days there is usually observed the discharge of a creamy liquid which rapidly becomes yellow and thick, often streaked with blood.

Although the disease under consideration is by no means very serious, ending in recovery in the great majority of cases when skilfully treated; yet sometimes the inflammation spreads along the Fallopian tubes to the peritoneum, where it may light up a fatal inflammation of that membrane.

*Treatment.*—The woman should be kept quiet in bed, complete rest of mind and body, are the primary essentials of treatment.

Her diet should be for the first few days very plain, consisting largely of milk, if the liquid agrees with her. Stimulants of every kind, as well as strong tea and coffee, should be avoided. The bowels must be moved by enemata of tepid salt water, or of weak castile soap-suds. Soft thick flannel cloth should be wrung out of hot water and applied to the abdomen, changing them until the skin be thoroughly reddened. Three times a day a stream of water, at a temperature of about one hundred degrees, should be thrown into the upper part of the vagina. If the pain be subdued and the patient rendered comfortable by these means, very well; but if not, a suppository, made after the following prescription may be inserted in the rectum and allowed to dissolve:





Fig. 14.

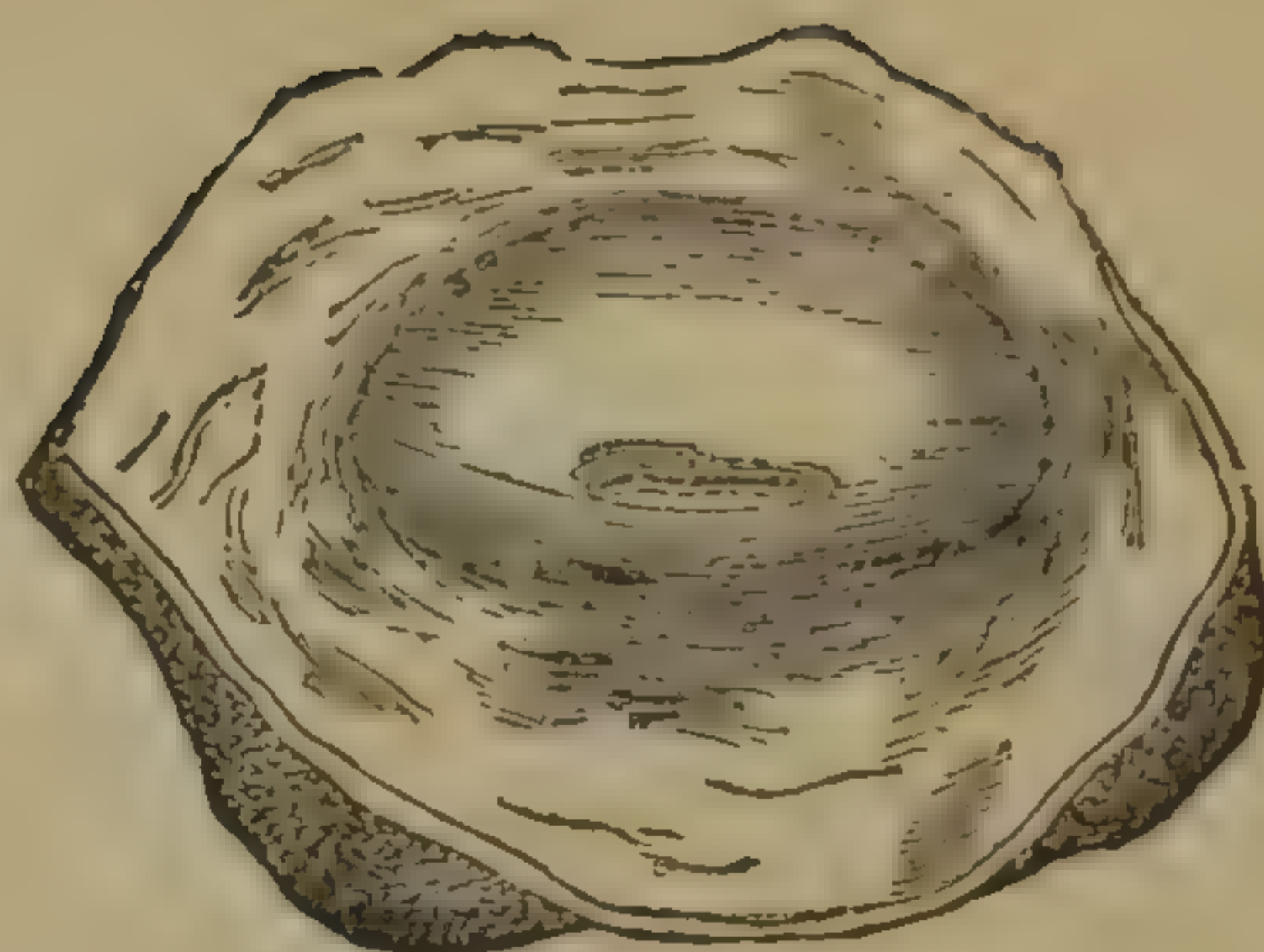


Fig. 16.

FIG. 14. Is a sectional front view of the womb, from which point of observation the cavity is seen to be triangular. 1 is the upper part of the vagina, 2 2 are the openings of the right and left fallopian tubes respectively.

FIG. 15. Is a sectional view of the womb from the side. This cut shows the cavity of the womb to be a narrow slit when viewed laterally. The external configuration of the organ and its natural inclination forward have been ably depicted by the artist.



Fig. 15.

FIG. 16. Is a view of the neck of the virgin womb and the opening into the body, as seen when the vagina has been distended by a speculum.

FIG. 17. Shows the slit-like cavity of the womb when viewed laterally. The tortuous white lines that surround the cavity are the tubular glands that pour forth the menstrual blood during the monthly periods.

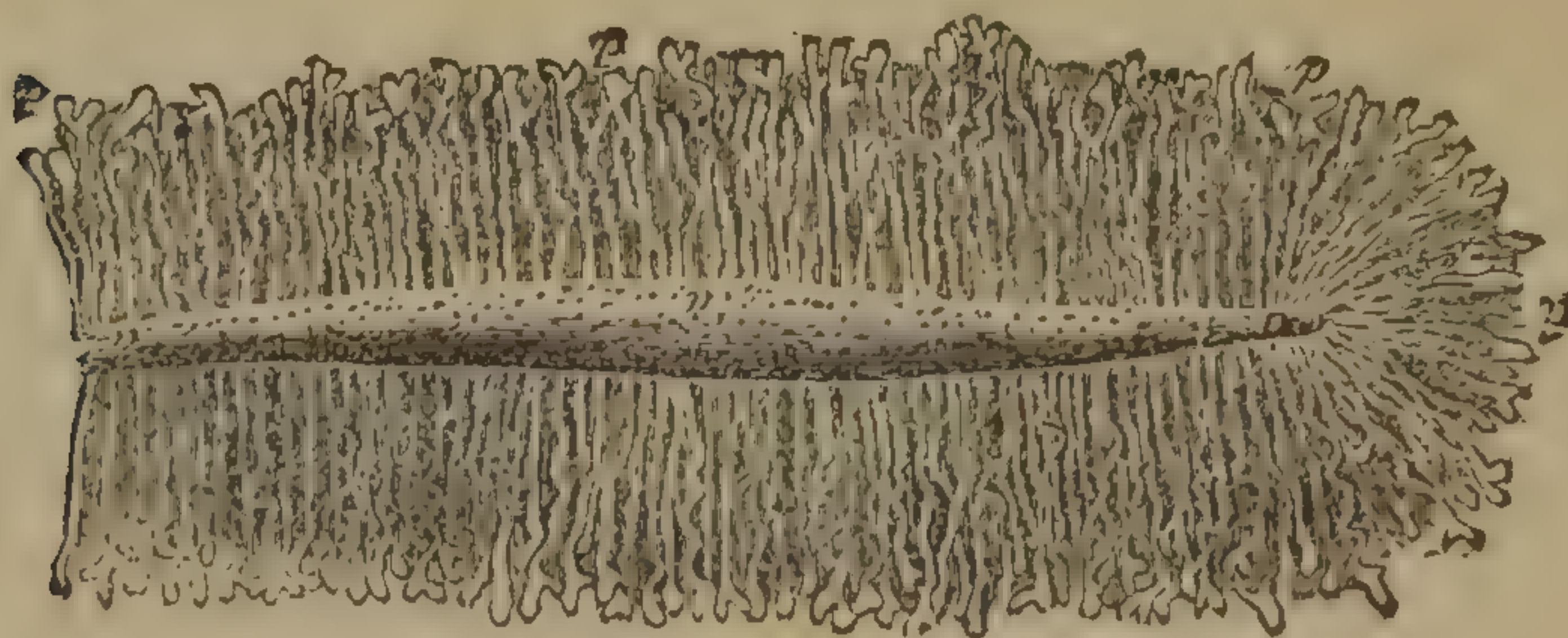


Fig. 17.





Fig. 18.



Fig. 19.

FIG. 18. Shows the relations and names of the several parts composing the external female generative organs.

FIG. 19. Is a perfect representation of the membrane lining the womb, as it appears after having peeled off, in the kind of painful menstruation known as *membranous dysmenorrhea*. At the upper right side a probe is passed through the fallopian tube.

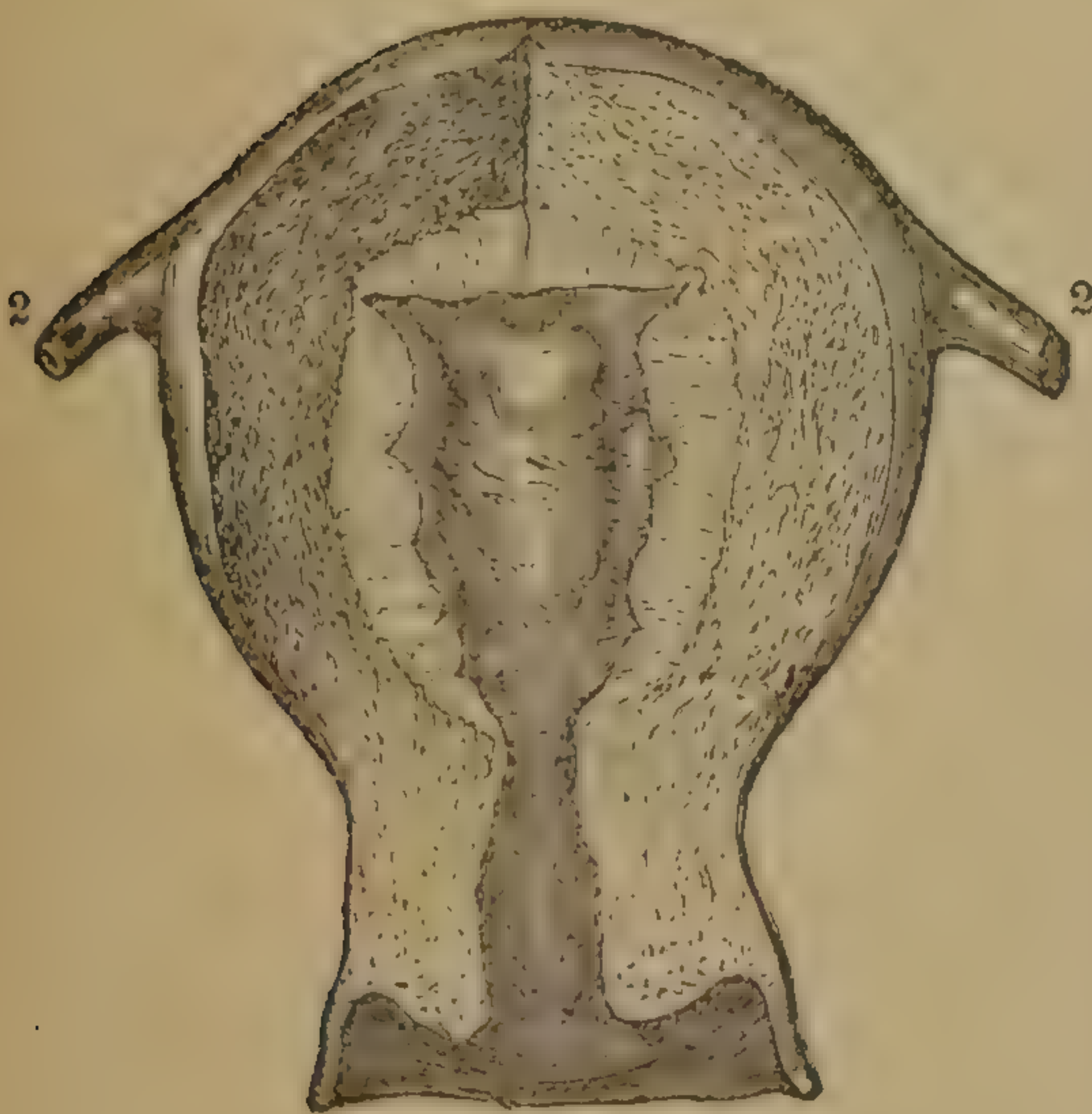


Fig. 20.

FIG. 20. Is a front sectional view of the womb, showing the thickened condition of its lining membrane at the approach of, during, and for a day or two after the menstrual periods. 1 is the neck of the womb and its opening, 2 2 are the round ligaments by which the womb is prevented from falling sidewise or backwards.



- 82 R. Cocoa butter.....40 grains.  
 Powdered opium.....16 grains.  
 Solid extract Belladonna..... 4 grains.

Melt the ingredients together and divide into 8 suppositories.

Hot foot baths and the use internally of prescription 83 until gentle perspiration be excited, will have an excellent effect by causing the blood to flow toward the surface of the body.

- 83 R. Tincture of veratrum viride..... $\frac{1}{2}$  dram.  
 Tincture of aconite root..... $\frac{1}{2}$  dram.  
 Tincture Virginia snake root.....1 ounce.  
 Simple syrup.....3 ounces.

One small teaspoonful every three hours until perspiration be caused. After the acute symptoms have passed off, the use of prescription 84 will do much to prevent the disease becoming chronic and to complete the cure.

- 84 R. Fluid extract black snake root.....1 ounce.

Five to eight drops in water one hour after meals.

#### CHRONIC INFLAMMATION OF THE INSIDE LINING OF THE WOMB.

The structure and functions of the membranes lining the neck and the body of the womb are very different; although they are both classed as mucous membranes.

Mainly for this reason it is quite common to find the chronic inflammation constituting the disease under consideration confined either to the body or the neck.

The books very properly distinguish between internal inflammatory disease of the neck and of the body of the



uterus. But as the symptoms for all practical purposes are the same we shall simplify the subject for the popular reader by considering these disorders under one general head.

This disease occurs quite frequently both in the married and in the single; some eminent authors hold that it is observed oftener in the latter than in the former.

*Causes.*—One of the most fruitful causes of this mischief is exposure to cold and wet during menstruation; particularly if the patient's health has previously been poor and her system unfitted to resist disease. At this time the membrane inside the uterus is gorged with blood and is busy pouring it out as menstrual fluid to relieve the natural uterine congestion. When this very important process is suddenly checked acute inflammatory disease is often set up; but it may almost at once assume a low grade of chronic inflammation which, unlike the acute variety, has no inherent tendency to get well.

In some cases the opening from the body of the womb toward external parts is so small that the menstrual blood cannot escape quickly, but remains in the womb until it forms clots which irritate the organ, causing it to contract violently to expel them; this action of the non-pregnant womb, being unnatural, soon causes chronic inflammation.

Abortions, particularly those brought about by violence, cause the disease under consideration in very much the same way as it is produced by suddenly checking the menstrual discharge.

Child-birth in weak nervous women, whose health has previously been broken, is sometimes followed by this



disorder : particularly if the bag of waters has burst too soon during labor, thus allowing the delicate internal surface of the womb to contract violently on the irregular surface of the child's body. Suffering women sometimes have galvanic pessaries passed up into the womb to be worn there, usually as long as the instrument can be tolerated ; these pessaries are commonly intended to bring on the menstrual flow when it is arrested by disease : if the patient submits to the treatment, inflammation of a violent character is often speedily excited ; in fact this will always be the result if the metallic rod be only kept in the womb long enough. In the same way the rough and unskilled introduction of a sound for the legitimate purpose of examining the womb will sometimes have a like disastrous effect.

*Symptoms.*—In a very few cases this disease exists without causing enough suffering to induce the patient to submit to treatment : this is, however, a rare exception, not the rule. Almost invariably distressing and persistent symptoms are speedily developed.

When the womb is free from disease there are no sensations connected with it to teach a woman she has any such organ at all ; but when it is inflamed both its existence and situation are well indicated by weight, dragging, shooting pain or constant, dull, deep-seated aching in the pelvis, shooting outward to the ovaries and downward to the thighs. The back aches sometimes along its whole length, but at its lower part the pain is usually very severe. Walking almost always aggravates these symptoms, and too much standing is nearly as bad. In many cases the rectum and bladder become irritable, adding materially to the sufferer's distress. Profuse leucorrhœal discharge of a clear, tough, glairy



or whitish appearance is always present; in advanced cases it sometimes has a rust-colored hue for a week or two after the menses cease, from the admixture of a small quantity of blood.

The menstrual discharge is sometimes so profuse as to constitute a genuine hemorrhage; in other cases it is scanty, showing a tendency to cease totally. In rare cases the entire lining membrane of the womb peels off and is discharged either whole or in shreds at every or each alternate menstrual period.

As the general health and strength of the sufferer give way, nervous symptoms are coincidently developed, greatly increasing her distress, destroying her fortitude and diminishing her capacity to endure her increasing physical troubles: she has neuralgic headaches, especially at the top of the head; she is sad, weeps easily, mental as well as physical efforts become a burden; she feels as if she were destitute of both friends and sympathy, although these may be freely at her command.

The early symptoms of pregnancy are occasionally observed, such as morning sickness and vomiting, the abdomen is puffed up by flatus, the breasts enlarged and tender, the areola around the nipple darkened and the menses irregular. Married women suffering from the disorder under discussion are usually sterile.

*Treatment.*—This disease is regarded by medical men as being very obdurate. In many cases a cure is very difficult. But we think much better results would be secured if more attention were given to improve the patient's general health and to regulate the blood circulation. Instead of being improved by treatment that neglects these measures, this disease is often made



worse. The influence of powerful caustics applied to the inside of the womb in seeking to effect a cure is also very often disastrous. Plain nutritious food, fresh air, night and day, no stimulants of any kind, gentle outdoor exercise daily, salt-water baths with abundant rubbing afterward, removal of all pressure from the abdomen by clothing, plenty of sleep and an easy mind, are the first necessities of successful treatment. If the patient be pale and bloodless, prescription 85 should be taken for about two weeks:

85 R. Syrup of the iodide of iron..... $\frac{1}{2}$  ounce.  
Glycerine.....2 ounces.  
Water.... $1\frac{1}{2}$  ounces.

Shake the bottle. One teaspoonful after meals.

After which remedies, known as uterine tonics, possessing much virtue to relieve inflammation of the womb and enable the organ to resist influences capable of causing this diseased condition, should be used for several months. Prescriptions 86, 87 and 88 are admirably adapted to secure these effects.

86 R. Fluid extract black snake root.....1 ounce.  
Fluid extract blue cohosh.....1 ounce.

Mix. Take ten to twelve drops three times a day in water between meals.

87 R. Fluid extract black haw.....2 ounces.  
Fluid extract skull cap..... $\frac{1}{2}$  ounce.  
Glycerine .....2 ounces.  
Water..... $3\frac{1}{2}$  ounces.

One teaspoonful in water three times a day one hour before meals.

88 R. Compound syrup of partridge berry.....6 ounces.  
Fluid extract star grass.....2 ounces.

One or two teaspoonfuls after meals.



Better results are to be obtained by changing these prescriptions occasionally than by using any one of them continuously.

Large injections of tepid water or of salt and water should be used once or twice daily for the purpose of washing away the acrid discharges and preventing the mischief occasioned if these be allowed to remain and irritate the mucous surfaces with which they come in contact. Every night the following bolus should be placed against the mouth of the womb and allowed to dissolve there :

89 R. Powdered gentian root. ....	2 drams.
Powdered poke root.....	40 grains.
Powdered blood root.....	40 grains.
Powdered gum arabic.....	30 grains.

Make into a stiff paste with water, divide into 12 boluses.

#### ULCERATION OF THE NECK OF THE WOMB.

The diseased condition to which physicians apply the term is exceedingly common. But an ordinary ulcer of the uterus differs very materially from the deep ragged sores called ulcers often seen on the surface of the body.

The graver kinds of uterine ulceration known as specific, corroding and cancrroid ulcers, resemble the former variety in appearance ; but as patients can do nothing for themselves in these severe surgical diseases, it would be useless to describe them in a popular work.

The books mention several kinds of simple ulceration. As the causes, symptoms and home treatment of all are identical, we shall include the whole under the general term ulceration. The sore usually begins at the margin of the little opening leading to the inside of the womb known as the mouth, from this point the ulcerative pro-



cess gradually extends upward toward the inside of the uterus, and outward toward the vaginal walls.

*Causes.*—Although congestion and inflammation may, and do exist for several months without being accompanied by ulceration, yet when the latter condition is present the former is never absent.

When the womb is so far displaced from any cause that the neck is pressed against and made to rub on the rectum behind, or on the perineum below, it inflames and ulcerates in very much the same way that inflammation and ulceration will be caused in any other part of the body by pressure and friction. Ulceration is sometimes caused by the acrid discharges issuing from disease existing inside the womb or by an irritating vaginal leucorrhœa. If these fluids are not completely washed away from the womb they lodge about and destroy its mucous membrane; not quite so quickly, it is true, but quite as certainly as a caustic chemical. If there be added to the corroding action of these fluids, the motion of the parts caused by much walking or sewing-machine work, ulcers very soon form on the neck of the womb. Pessaries intended to support the uterus necessarily squeeze and rub against it at every motion of the body, very soon producing the worst forms of simple ulceration.

The distension of the neck of the uterus during childbirth is so very great that it rarely escapes more or less laceration; because of the discharges bathing the parts for weeks after that event these little rents often fail to heal perfectly, especially if the woman's health be poor. Under these conditions they become small ulcers, sometimes remaining unhealed for years.

*Symptoms.*—These are very much like the symptoms



arising from chronic inflammation of the uterine neck, except that when ulceration is added thereto the pains in the back, groins, and through the pelvis are usually more harassing, the ropy, whitish or clear leucorrhœa, sometimes streaked with blood, becomes more copious, and the effects on the general health more disastrous.

*Treatment.*—The local remedies recommended in the books for the cure of ulceration, and commonly used by medical men, are the solid pencil of silver nitrate, chromic acid, the red hot iron or the acid nitrate of mercury. We are of opinion that milder treatment will secure better results.

In cases where the leucorrhœal discharge is streaked with blood a suppository made according to prescription 90 should be introduced into the vagina up to the neck of the womb every night before retiring, and allowed to dissolve there. The genital passage should be thoroughly cleansed twice daily by a large injection of tepid water or of salt and water.

90 R. Tannin .....2 drams.  
Powdered kino.....1 dram.  
Starch .....3 drams.

Make the powders into a mass by mixing them thoroughly with glycerole of starch, and divide into 15 suppositories.

After the passage has been perfectly cleansed by the injection of tepid water, as before directed, prescription 91 should be used twice daily until a cure be attained.

91 R. Powdered witch hazel .....1 ounce.  
Powdered cranesbill root .....1 ounce.  
Warm water.....2 pints.

Infuse half an hour, strain, and use for one injection.



In some obstinate cases the above remedies may lose their power to continue the improvement before the cure is completed ; if so, the following treatment should be substituted. After the genital canal has been cleansed by a copious injection of tepid water, the patient should lie on her back, so that the remedy to be used cannot immediately flow away, and with a suitable syringe she should inject into the passage twice daily about two tablespoonfuls of prescription 92, allowing it to remain from five to ten minutes, or longer, after which the passage should be freely washed out a second time with tepid water.

If the remedy proves too strong, it may be reduced to a proper strength by the addition of water.

92 R.	Powdered golden seal.....	½ ounce.
	Powdered marsh rosemary root.....	1 ounce.
	Carbonate of potash.....	½ ounce.
	Boiling water. ....	1 pint.

Boil fifteen minutes, strain, and when cold it is ready for use.

By the judicious use of the foregoing treatment, a cure of simple ulceration of the uterus may be readily effected.

#### NEURALGIA OF THE WOMB.

Neuralgia often exists in very severe forms on the surface of the body ; yet the painful parts appear to be quite healthy, even on the closest inspection ; the sensations alone are at fault. The same statements are true of the womb when it becomes neuralgic. Although it be the seat of severe pain, there is no heat, redness, nor swelling. It may not be displaced, and there are no discharges. In old and obstinate cases, however,



for the cure of which no effective treatment has been employed, the womb often becomes very sensitive to the slightest pressure.

*Causes.*—Exhausting fatigue near the menstrual period, or after miscarriages, particularly if much blood was lost at that time; cold vaginal injections, or in fact any cause by which the bodily powers are unduly expended and the health undermined, or the uterus irritated, may cause neuralgia of the womb, as similar causes may produce pains of this sort in other parts of the body.

*Symptoms.*—Like neuralgia elsewhere, the painful attacks often come on suddenly without warning. The severest paroxysms may be preceded and followed by seasons of perfect freedom from pain. Some patients suffer several seizures during a day, others may be quite easy for days or weeks.

In one patient the pain is as sharp, severe, and evanescent as the thrust of a dagger; in another it is unbroken agony for months, if not relieved by anodynes of some sort.

Sometimes the pains radiate from the uterus as if it were a telegraph office, and messages of misery went out on every wire; pains are felt in the back, ovaries, thighs, and perhaps all over the abdomen. In true neuralgia of the uterus all these sympathetic miseries disappear when the womb is free from pain; the sufferer is then quite easy; and if it were not because of a vivid remembrance of the past and a dread of the future she would consider herself in good health. Uterine neuralgia may come on while the patient is at rest, but exertion is apt to invite the attacks, particularly if that happens to be fatiguing. The sufferer, finding her



distress increased by walking or riding, learns to relieve herself by lying down, and finally remains in bed or on a lounge nearly all the time. Although the pains are almost always more apt to recur about the menstrual periods, the disease cannot be classed as painful menstruation, because pains of the same character often harass the patient when the menses are as far off as they can be.

*Treatment.*—During the paroxysms of pain, the first necessity is to afford the sufferer relief. To attain this desirable end the simplest remedies should be tried first; she may be placed in a hip-bath at a temperature of one hundred degrees Fah.; while she is in the bath, hot water should be gently poured down the sides of the tub until it is as hot as she can comfortably bear it. She may remain in the bath ten minutes, or until the skin exposed to the water has become reddened. A sitz-bath used in this way almost invariably affords very great relief, which is rendered complete and prolonged by injecting the hot water into the vagina while sitting in the bath. She should then be removed from the bath and placed in bed, and have large soft flannels wrung out of hot water, freely sprinkled with laudanum, applied over the abdomen. The continued application of heat and moisture powerfully opposes the return of the pain. At the same time a dose of prescription 93 should be given every thirty or forty minutes until complete relief from the agony has been obtained.

93 R. Tincture yellow jessamine.....  $\frac{1}{2}$  ounce.  
 Tincture black snake root..... 1 ounce.  
 Fluid extract pleurisy root.....  $1\frac{1}{2}$  ounce.

Twenty drops in water, as directed above.



Some of the severest cases will, however, partially resist these measures. Under these circumstances a suppository, made according to prescription 94, should be placed in the rectum, and repeated in one hour, if necessary.

94 R. Sulphate of morphia..... 2 grains.  
Solid extract belladonna..... 1 grain.  
Powdered licorice root.....30 grains.

Mix, and divide into 8 suppositories.

Or, if the suffering be very great, a physician may be employed to give the patient a hypodermic injection of a solution of morphia. This operation will always afford complete temporary relief.

After the pain is subdued and the sufferer has enjoyed a day's rest, treatment must be commenced to prevent its return, in other words, to effect a permanent cure.

In some cases the painful seizures will occur at regular intervals ; then it is in the highest degree probable that the uterine neuralgia is due in some measure to malaria. When this is the case, three doses of prescription 95 may be taken with very great advantage to the neuralgia, without inducing any of the disagreeable effects produced by full doses of quinine.

95 R. Sulphate of quinine.....24 grains.  
Dilute hydrobromic acid..... 2 drams.  
Water.....1½ ounces.

To be taken in tablespoonful doses about ten hours apart.

After the above remedy has been taken as directed, the following compound may be taken with great advantage :



96 R.	Tincture muriate of iron.....	3 drams.
	Sulphate of quinine.....	30 grains.
	Tincture of capsicum.....	2 drams.
	Glycerine.....	2 ounces.
	Water to make.....	4 ounces.

One teaspoonful in water after meals.

The general health of these sufferers is always below the proper standard, especially if the disease has harassed them for a long time. For this reason hygienic means intended to improve their physical condition should be diligently used. Tepid salt-water baths three or four times a week with friction of the skin afterward are of decided service. In many cases the treatment known as the movement cure is signally successful as an adjuvant. If an expert operator cannot be obtained to apply this treatment, a thorough kneading of the whole body three times a week by any vigorous rubber will do much good. If the patient be constipated or dyspeptic, kneading the abdomen daily just as a baker kneads a mass of dough, will do much to improve the digestion and render the bowels soluble.

At first this treatment must be applied very gently, because of the extreme tenderness often present, but by judicious manipulation this usually disappears gradually, when more vigorous treatment may be applied with increasing benefit.

Constipation is often a source of discomfort and disease; but great care must be exercised in the use of cathartics. If any medicines of this class be used they must be laxatives of the gentlest character. A small dose of the citrate of magnesia may be taken, or the following excellent preparation will act very mildly and effectively :



97. R. Powdered licorice root. .... $\frac{1}{2}$  ounce.  
Powdered Turkey rhubarb..... $\frac{1}{2}$  ounce.  
Powdered cream of tartar ..... $\frac{1}{2}$  ounce.  
Powdered anise seed.....1 dram.

Mix the powders thoroughly. Half to one teaspoonful may be placed dry on the tongue and washed down with a mouthful of water.

No laxative more powerful than the above very mild mixture should be taken, as nothing is more certain to bring on an attack of pain even when the patient is quite easy than powerful purgatives. It is much safer to secure an action of the bowels daily by the use of enemata of tepid water, salt and water, castile soap suds or infusion of slippery elm bark. In some cases, an eclectic irritating plaster worn over the lower part of the back secures valuable curative results. It must be allowed to remain until a sufficient amount of irritation be produced on the skin to relieve the deeper distress; the part covered by the plaster should be examined every two or three days to observe the effect. It must never be permitted to remain long enough to cause supuration; if it should happen to do so, the sore should never be wet with water. Wipe off the discharges with dry cloths.

#### DISPLACEMENT OF THE WOMB DOWNWARD.—PROLAPSUS.

During a woman's lifetime the uterus is naturally liable to very great variations in its size and location. In the virgin condition it is less than three inches in length, two broad and one thick; it weighs somewhat more than one troy ounce and is situated deep down in the pelvis. But at the end of gestation it has grown to be fully twelve inches in length, eight or nine in



diameter, and weighs about two pounds without its contents, immediately after the completion of labor.

In order to permit the expansion that takes place during pregnancy and the contraction occurring after parturition, the womb is necessarily very loosely attached to the surrounding parts.

It floats in the pelvis very much as any light body floats in water. In fact, it is constantly, as we have before shown, in motion up and down with every breath. The uterus is forced momentarily downward by a cough or a sneeze. When the bladder is full, the womb is pushed backward; when the rectum is distended, it is moved forward.

#### HOW THE WOMB IS SUPPORTED IN ITS PROPER PLACE.

The top of the womb is firmly attached to the fleshy roof of the pelvis; it is also intimately connected to the bladder and the rectum. The support afforded to the uterus by the surrounding viscera is greatly strengthened by the elastic cellular tissue packed into every vacant corner. The womb is also poised upon and supported by the vagina like a capital on a pillar. This passage is usually described as being a tube, the walls of which are thick, elastic, and resisting; it becomes a tube when its sides are distended, but in the natural condition in the pelvis its front and back walls are always in contact; an arrangement that greatly increases the supporting power of the vagina, rendering it, in fact, the most important agent in keeping the womb high enough in the pelvis.

In addition to these supporting forces, the womb is stayed by a variety of ligaments. Two folds of tough peritoneum, formed into wide, strong bands, pass from



the uterus to the bladder, and two of the same sort to the rectum. The broad ligaments extend from the sides of the womb outward like great wings ; their action is aided by the round ligaments. Nature has thus done her best to make assurance doubly sure that the womb should be able to resist, successfully, powerful influences tending to force it downward or laterally.

#### CAUSES OF UTERINE DISPLACEMENTS.

The forces Nature has provided to sustain the non-pregnant uterus in its proper place are quite sufficient so long as these are not weakened, and the weight of the womb is not increased.

When conception occurs, and the uterus has undergone the requisite development, other supporting forces are provided so admirably adapted to the altered condition that the enlarged womb, with its contents, actually rises, and is sustained higher in the pelvis than before conception took place.

The weight of the womb may be increased by the large quantity of blood loading its vessels while it is congested or inflamed, and we find that when the uterus is in either of these conditions it is displaced downward. If the disease be cured, the relieved womb is readily and permanently replaced ; but if it continues congested or inflamed, it increases in size and weight by a deposit in its meshes of a firm, jelly-like substance ; the womb is then said to be hypertrophied. As this condition, when fully established, is more difficult to remove, it is therefore likely to be a more permanent cause of displacement and distress.

The immense increase in size and weight of the uterus at the end of pregnancy naturally disappears after



delivery, and the organ returns, by a wonderful change called involution, nearly to the dimensions it had before conception. But the uterus sometimes stops short before this is quite attained, and it remains as large and heavy at the end of many months after child-birth as it was during the second, third, or fourth month of gestation. After delivery the forces that supported the womb during pregnancy are necessarily absent; as it is still large and heavy, it inevitably sinks down in the pelvis, very often as far as it is permitted by the soft parts below without protruding externally.

During gestation an immense current of blood and juices flow to the womb to provide nourishment for it and its growing contents, as well as for the secondary purpose of softening the ligaments and contiguous structures to enable them to undergo the progressive and long continued stretching to which they are subjected as pregnancy advances without causing the mother unnecessary pain. If we add to this the still farther weakening of the parts by the distension taking place at delivery, and remember that the enlarged womb does not return to its normal, non-pregnant size and weight until nearly six weeks after parturition, we can readily see how getting up and being about too soon after child-birth is a most fruitful cause of downward displacements. Besides these influences that cause falling of the womb by increasing its weight, there are others which produce the same results by weakening its supports. The muscular tissue situated between the vaginal orifice and the anus, called the perineum, forms a foundation for the vagina, which rests on it very much as a pillar is supported by its pedestal.

The perineum always undergoes immense distension



during child-birth, which it usually bears wonderfully well; but sometimes it is, in spite of its elasticity, torn more or less. The vaginal support is thus weakened according to the extent of the laceration; under these circumstances the womb is apt to sink.

The sustaining power of the vagina may also be diminished by long continued congestion or chronic inflammation accompanied by vaginal leucorrhœa; or the uterus may be forced downward by tight and heavy clothing, or by unusual muscular efforts.

*Symptoms.*—The effects caused by falling of the womb vary according to the degree of dislocation, as well as by the causes to which it may be due. They are of two classes—those arising from the displacement itself, causing the uterus to press on and interfere with the functions of contiguous organs, and those depending on the uterine diseases arising because of its unnatural position.

The increased distress endured by women who suffer from this difficulty when they walk or work too much, and the great relief obtained by lying down, prove that much of the misery is caused by the fallen uterus pressing on and dragging down adjacent parts. It is very fortunate that it is only when the womb is decidedly below its proper position a woman observes any disagreeable symptoms. The lives of the gentle sex would be, almost without exception, burdensome indeed if a slight displacement of the womb gave rise to symptoms sufficiently tangible to make them aware they had an organ of this sort.

When the womb is displaced suddenly by violence of any sort there is always severe pain through the pelvis, sometimes deep faintings, severe floodings, vomiting, collapse, or inflammation of the pelvic peritoneum.



When the falling occurs by degrees the symptoms are of the chronic variety, because the womb, having sunk slowly from its natural position, both it and the adjacent organs have gradually become accustomed to their new relations and positions.

When the fallen uterus has reached what is called the second or third stage there is a dull, heavy, dragging pain in the back with pain in the loins, the patient feels as if the contents of the pelvis must escape downward. To these may be added obstinate constipation with a constant desire to defecate without obtaining relief by the attempt.

The bladder is often rendered irritable by severe displacements, and in some cases urination is impossible until the patient learns by experience to obtain relief by pushing away the fallen womb from the neck of the bladder on which it presses. Leucorrhœa is a frequent symptom, and in some cases the menses are profuse. All these distresses are aggravated by exertion in the erect position, and relieved by lying down.

#### SHOWING WHEN FALLING OF THE WOMB NEEDS TREATMENT.

If we observe the various styles of noses belonging to persons whom we meet, scarcely one will be noticed of faultless symmetry. The points of some are turned up too much or too far down; in others the deviation from the direct line is to the right or left. In some the nasal bridge is too strongly developed, in others there is a decided depression where the gentle elevation ought to exist on artistically formed noses. But surgeons never recommend an operation to improve these defective nasal organs so long as they serve the owner's purposes.



The same statements are true, to a large extent, concerning the slightly displaced womb. If a line be passed through the female body from the navel to the tip of the coccyx, it will be parallel with the long axis of the womb if it be in its proper position, and the neck of the organ will be found about four inches above the vaginal orifice. The uterus may then be said to occupy its classical position in the pelvis. Happy is the woman who keeps it there; but if in any case we find it is not just where it ought to be according to the anatomists, we never meddle with it as long as no trouble arises therefrom.

*Treatment*—The successful treatment of uterine prolapsus requires two objects to be accomplished—to replace the womb in its proper position, or at least where it shall give no trouble, and to keep it there by means that shall be quite comfortable to the patient. A very great variety of contradictory treatment has been recommended by various medical authors for this purpose. We shall mention only that which has proved satisfactory in our hands, in ordinary cases, and most likely to be useful to patients in home treatment.

The very first thing to be done in every case without exception is to remove all weight from the hips and abdomen, suspending the clothes from the shoulders by attaching them to a waist made for the purpose.

In many cases, not only is the uterus and contiguous organs displaced downward, but the intestines and even the stomach has descended, so that the external shape of the abdomen is altered. A hollow may be observed at the pit of the stomach, while the abdomen bulges out unnaturally at its lower part, permitting the intestines to settle down and occupy the place where



the womb ought to be. As two things cannot be in the same place at the same time, it is evident the uterus cannot rise to its proper position until the intestines are lifted up out of the way. Failure to grasp and act on this fact is one of the reasons why so little success attends the common treatment of prolapsus.

A properly fitted abdominal bandage is always successful in lifting up and supporting the contents of the abdomen in their proper place, and commonly affords the patient very great and immediate relief. But here the good they do ceases, and they soon begin to do harm, if other treatment be not combined with their use. Whenever groups of muscles are relieved from work, their duty being done for them by some artificial support, they rapidly degenerate, losing whatever contractile power they may have had. To prevent the weakening and increase the strength of the abdominal muscles in women who wear bandages, so that after a time the bandages can be dispensed with, the muscles having become competent for their work, passive exercise must be applied once a day as follows : The patient should lie on her back, having her feet drawn up to relax the abdominal muscles ; an assistant will then knead the abdomen just as a baker kneads a lump of dough. The treatment must be applied gently at first, especially if there be tenderness ; this will, however, quickly disappear, the muscles will acquire strength and permanently regain their normal length ; the intestines will be supported in their proper place, room made for the uterus to rest, and the woman's shape greatly improved. When these important ends are attained, the bandage has done all the good of which it is capable and should be laid aside.



In women whose pelvic organs have not fallen below their natural position, there is a deep cleft upward between the thighs; the tissues closing the outlet of the pelvis are drawn up and supported mainly by the tonic action of the muscle known as the levator ani; acting as it does, this muscle not only directly supports the pelvic outlet, but it assists actively in supporting the vagina and uterus. Its elevating power may be felt by placing the hand on the part, and then bringing it into action. When both the contents of the abdomen are displaced downward, and the perineum depressed, the muscle alluded to is elongated and weakened. The same principle of treatment must be adopted here that we have prescribed for the muscles of the abdomen. The outlet of the pelvis should be supported by a bandage passing between the thighs, drawn close up to the body and attached to an abdominal belt before and behind. The levator ani must be exercised by causing the patient to lie on her back, drawing her heels nearly up to her hips and spreading her knees apart, then bringing them slowly together against resistance offered by an assistant.

By these means the muscles in question, and other muscles inside and outside the pelvis, indirectly contributing support to the womb, will be invigorated. As soon as this is adequately attained, the bandage should be laid aside and the muscles allowed to do the work to which they have been fitted by nature.

In many cases a womb displaced downward slips up into the pelvis, high enough to greatly relieve the patient simply by lying down; if this does not succeed let the woman elevate her hips by getting on her knees and elbows, when it will very often glide into its place



either with or without a little pushing applied by the patient herself.

A few months ago we attended a lady over eighty years of age in whom the uterus, vagina, and part of the pelvic organs protruded between the thighs whenever she stood up or walked about, forming a projection about eight inches long, and four inches in diameter at the thickest part. A case of so aggravated a character in a lady of her age could not be cured; she was, however, rendered quite comfortable, and enabled to be about without suffering, by replacing the parts within the pelvis, and introducing into the vagina a soft rubber air inflated cushion for the purpose of keeping them there. The prolapsed abdominal organs were supported by a belt around the body, and the cushion in the genital passage was prevented from being forced out by two straps passing between the thighs and crossing each other at the vaginal orifice; the latter were kept in position by being attached to the waistband at the back and front. Excellent results can be secured by a Livingston supporter.

The general health of patients suffering from prolapsus uteri, must be improved by baths, change of air, and scene whenever practicable, and by gentle exercise adapted to their strength. The vaginal walls must be invigorated, and the size of the canal diminished by the use of cool hip-baths, injections of salt and water, or sea-water. Vaginal injections prepared according to prescriptions 98, 99, or 100, are very effective.

98 R. Powdered golden seal..... $\frac{1}{2}$  ounce.  
Hot water..... 1 quart.

Infuse one hour, strain and use the whole for one injection,



- 99 R. Powdered blackberry root bark..... $\frac{1}{2}$  ounce.  
 Warm water.....1 quart.

Infuse one hour, strain and use the whole for one injection.

- 100 R. Powdered marsh rosemary root..... $\frac{1}{2}$  ounce.  
 Warm water.....1 quart.

Infuse one hour, strain and use the whole for one injection.

These vegetable infusions act both as mild but effective astringents and local stimulating tonics. They are superior to solutions of alum, tannin and the astringent salts of iron for the cure of vaginal relaxation and the chronic vaginitis which sometimes accompanies and renders uterine prolapsus all but incurable.

In patients whose blood is thin and watery, prescriptions 101, 102, or 103, will act effectively in improving the quality of the vital fluid.

- 101 R. Tincture of muriate of iron..... 3 drams.  
 Sulphate of quinine.....20 grains.  
 Syrup of orange peel..... 1 ounce.  
 Glycerine..... 1 ounce.  
 Water to make..... 4 ounces.

One teaspoonful in water after meals.

- 102 R. Bitter wine of iron..... 3 ounces.  
 Fowler's solution.....20 drops.

One teaspoonful after meals.

- 103 R. Pyrophosphate of iron.....30 grains.  
 Boiling water..... 2 ounces.  
 Dissolve the iron in the water, and add fluid  
 extract gentian.....2 drams.  
 Curaçoa.....1 ounce.  
 Water to make.....4 ounces.

One teaspoonful after meals.



When acute prolapsus, from any kind of violence, occurs, a skillful physician should be summoned to conduct the treatment, because if these cases be not promptly and properly treated, they are apt to result in very grave consequences.

Pessaries. The different kinds of pessaries offered to correct uterine displacements are almost endless. The mere fact that there are so many varieties shows that none yield results quite satisfactory in actual practice; this conclusion is verified both by the experience of medical men and of suffering patients. We have little to say in their favor, and much to say against them. The chief object to be accomplished in curing prolapsus is to restore tone to the vagina by causing it to contract; but if we introduce a pessary of any kind into the passage, the genital canal is stretched, and its supporting power diminished. Their presence irritates the parts, and causes profuse leucorrhœa. Patients often suffer from irritability of the bladder and constipation while using these instruments. The presence of a foreign body inside the genital passage directs the woman's attention unduly to the parts; the congestion from which they suffer is thus notably increased. Finally pessaries have been known to cause ulceration of the rectal and vaginal walls, by which openings were made into the adjoining cavities.

#### DISPLACEMENT OF THE WOMB FORWARD.—ANTEVERSION.

We have already seen that the classical position of the womb is with the body looking upward and forward and the neck downward and backward, strung like a bead on an imaginary line passing from the navel to the tip of the coccyx. Although the virgin uterus no doubt often oc-



cupies this perfect position, it very seldom, if ever does so after it has once brought to maturity the product of conception. The natural mobility of the virgin uterus is considerable; this is always increased after gestation, and its position is slightly, it may be, but really and permanently altered. One of the most constant alterations is a dropping down of the body of the womb toward the bladder. If this deviation from the true position of the virgin organ be not too great, it gives the woman no trouble, is not a disease, and requires no treatment whatever.

*Symptoms.*—These arise almost entirely from pressure by the womb on contiguous parts; thus the fundus falls upon the bladder producing a feeling of weight in the part, and a frequent desire to pass water, which is not perfectly relieved by doing so. Chronic inflammation of the bladder may be excited if the pressure be too long continued. The uterine neck, by encroaching on the rectum, causes, in some cases, an irritable condition of the bowels accompanied by bearing down pains. Painful menstruation and sterility are common results of anteversion.

*Treatment.*—It is perhaps more important in the displacement under consideration, than in any other, that all weight from clothing should be removed from the abdomen, because an anteverted womb is more directly affected by pressure than when it suffers any other form of displacement. The clothing should, therefore, be suspended from the shoulders by some suitable device. The anteverted womb may usually be replaced by the woman herself if she lies on her back and presses firmly on the abdomen just above the pubic bone upward and inward. The fundus of the uterus, when anteverted,



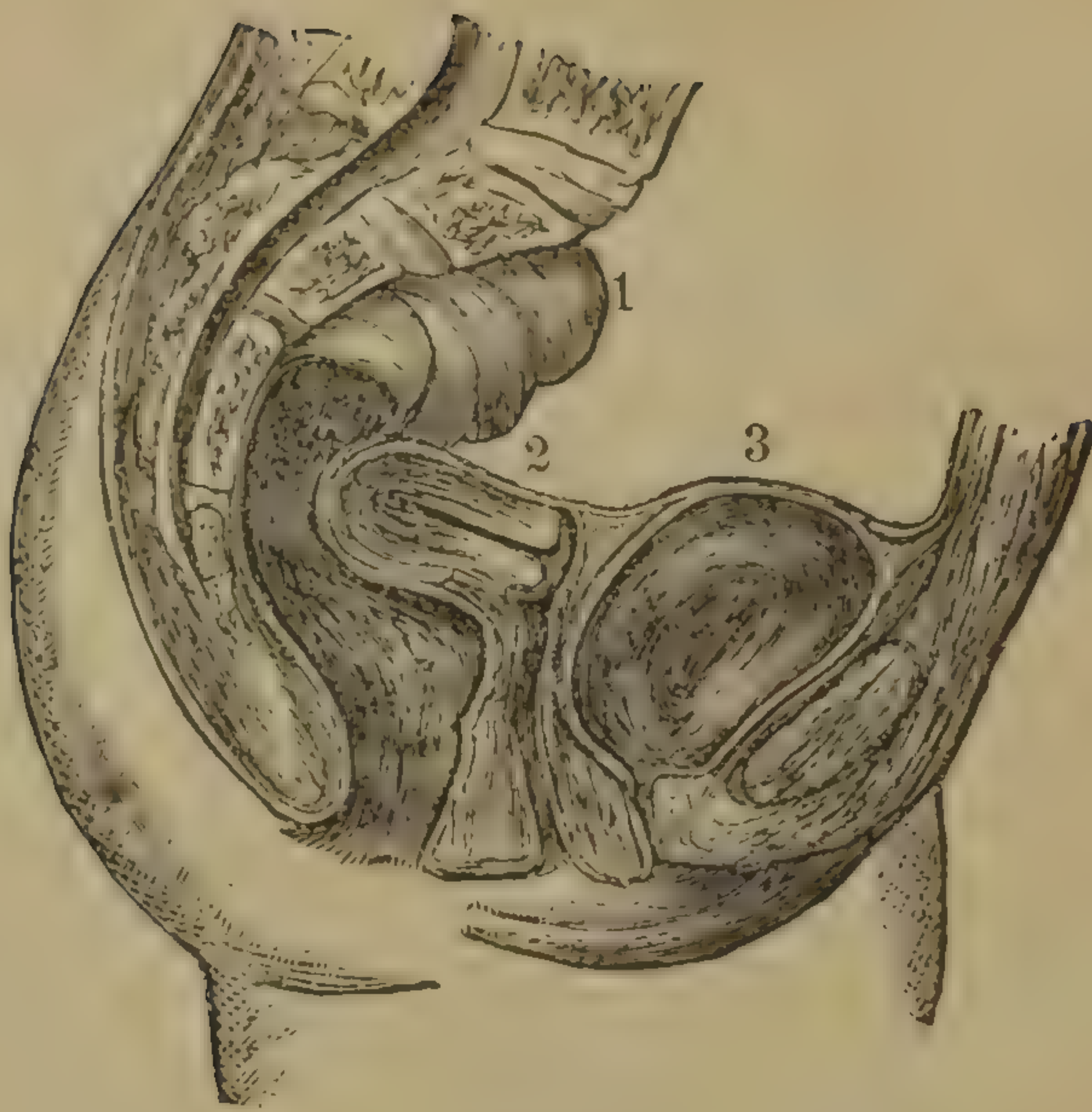


Fig 21.

FIG. 21. 1 is the rectum, 2 is the womb, 3 the bladder. The womb is seen to be displaced, the fundus having fallen backward and downward on the rectum, while the neck is turned toward the bladder. This displacement is known as *retro-version*.

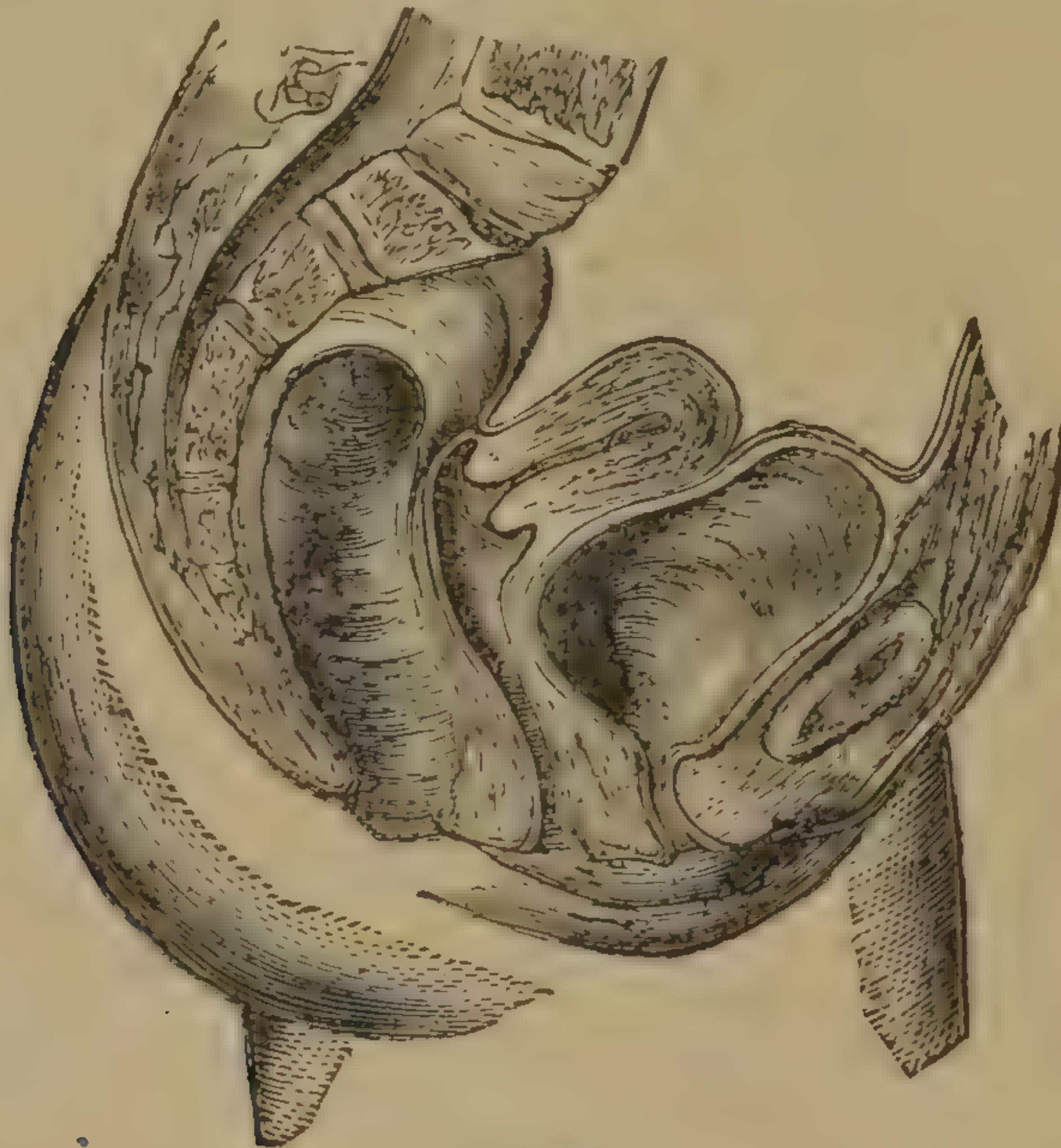


Fig 22.

FIG. 22. Represents the displacement known as *ante-version*, in which the womb is tipped too far forward and has fallen somewhat downward, causing it to press unduly on the bladder.





Fig. 23.

FIG. 23. Shows a displacement of the womb, of the same character as may be seen in Fig. 22, except that this is complicated by the womb being bent forward on itself, constituting what is known as anteflexion.

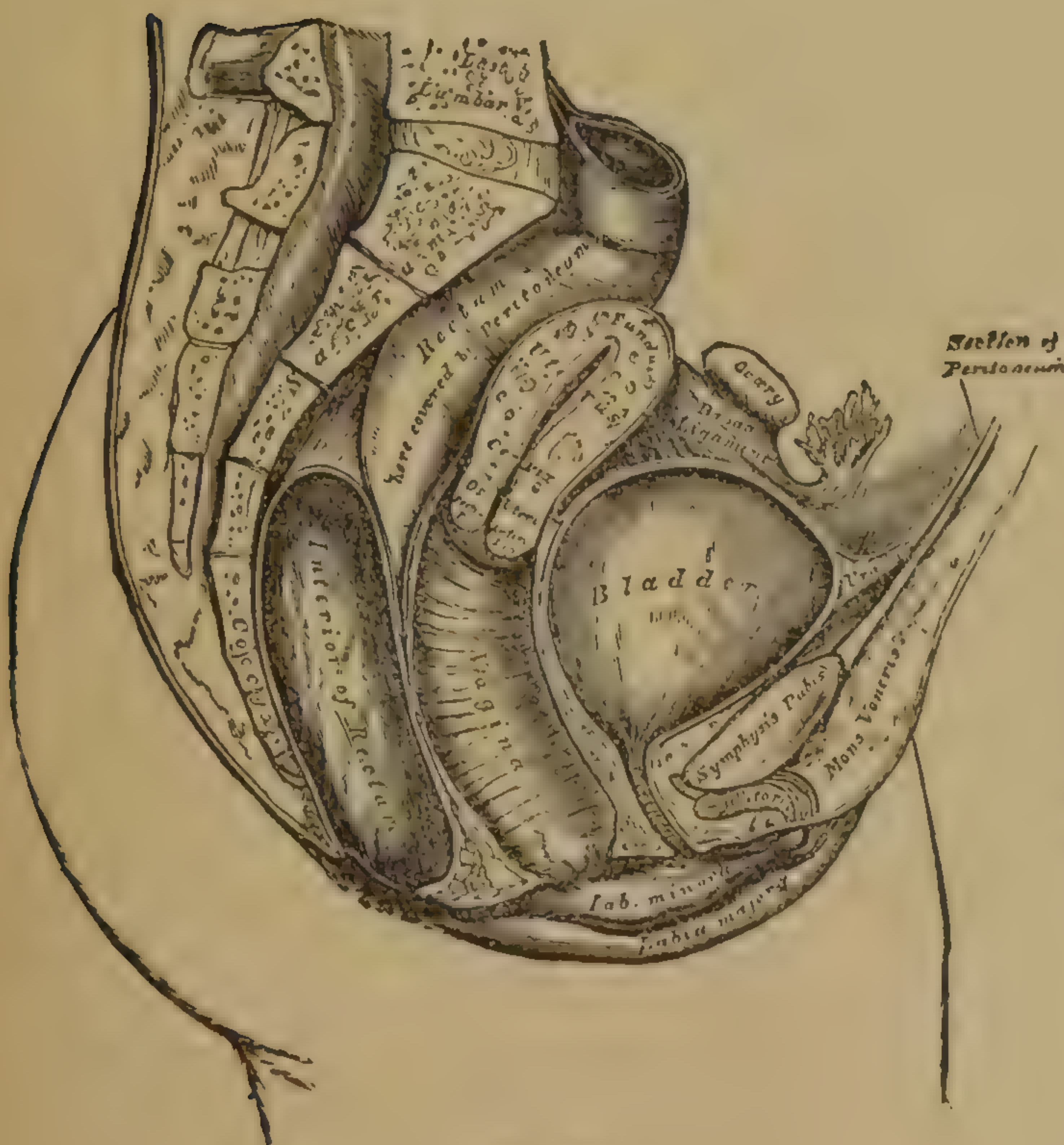


Fig. 24

FIG. 24 Is an accurate representation of the natural relations and positions of the internal female generative organs, as seen sideways. The names of each organ are printed thereon in small type.



lies immediately over this bone, and is often very easily lifted up by this means.

After the womb has been gently forced upward, an abdominal bandage, having a pad pressing on that part of the abdominal wall below the raised fundus, will do much to keep it in position. The local measures recommended for prolapsus will be equally serviceable in this difficulty.

#### DISPLACEMENT OF THE WOMB BACKWARD.—RETROVERSION.

When the womb is in this unnatural position the fundus inclines toward the rectum, while the neck approaches the bladder. The displaced organ will be found lying horizontally across the pelvis from back to front, and in extreme cases the body of the womb sinks even lower down than the neck.

*Causes.*—Retroversion of the womb is very often caused by bad management during the period a woman remains in bed after confinement; the uterus is then very large and heavy, and all its ligaments are greatly relaxed, therefore it readily obeys the law of gravitation. If the woman lies too much on her back, as many nurses ignorantly insist she shall during her convalescence, the womb is apt to fall in that direction. A properly adjusted bandage is a great comfort to a recently delivered woman, and is no doubt useful in restoring the figure to its virgin shape; but if it be applied too tight, the womb is very apt to be tilted backward by direct pressure brought to bear on it in this way.

We have already seen how the womb becomes prolapsed when it does not return to its virgin size and shape, but remains large and heavy after child-birth; downward displacement from this cause is often com-



plicated by retroversion, both being due to sub-involution. The difficulty under consideration may be caused by sudden shock, as in a railway accident, by blows or falls, or great muscular exertion.

*Symptoms.*—When the backward displacement is moderate, it may give rise to no symptoms; but when the fundus of the womb compresses the rectum behind, and the neck impinges on the bladder in front, the irritation is often very severe and distressing. Under these circumstances there is an almost constant desire to defecate, which is not relieved by the attempt. The pressure on the nerves also causes semi-paralysis of the rectum, rendering defecation difficult, or perhaps impossible without the aid of laxatives or enemata. In other cases the bowels become the seat of a low grade of inflammation when jelly-like masses of matter may be passed in large quantities with or without shreds of whitish, stringy, fibrinous membrane. Weight, bearing down and painful dragging sensations in the region of the uterus annoy the patient. Walking or standing too long speedily causes fatigue, and riding over rough roads or jolting on city cars is very injurious. No matter how much care is taken, all the distressing symptoms are decidedly worse before and during the menstrual period. As the weight of the uterus is then increased by the usual congestion, it falls lower than at other times.

In some cases the menstrual function is more or less disordered, in others it is quite unaffected. When retroversion occurs suddenly, the result of violence of any kind, the symptoms are marked and severe. The patient falls to the ground, and is unable to rise. She may lose the power to evacuate the bowels and bladder,



or these organs may be paralyzed, permitting their contents to escape involuntarily, and the patient suffers such agony that the face is bathed in perspiration, and the pulse becomes weak and fluttering.

*Treatment.*—In chronic cases, if the displacement be not sufficiently great to give rise to annoyance the womb should be let alone. As a rule, no disagreeable symptoms will be observed except the uterus be displaced far enough to press on and disturb the adjacent viscera: but if it be so dislocated, an attempt should be made to put the uterus in its place as near as possible and to keep it there. By means of rational treatment faithfully carried out, this desirable result can often be attained. Any pressure on the abdomen directly and positively tends to displace the uterus backward and to keep it so displaced: therefore, the first necessity of successful treatment is to hang up all the clothing from the shoulders by a properly constructed waist. After which the lower part of the chest may be expanded, room made in the upper pelvis for the uterus, and the elevation of the organ favored by methodical breathing and the chest expanded by carrying at arm's length overhead bags, containing from two to five pounds of dry beans or corn. If the womb does not yield to the above measures readily, local treatment as follows will be found very useful. The patient's bladder and bowels should be emptied and the clothing above the waist loosened, the patient should then be placed on a table covered with a thick quilt, resting on her knees and elbows: in this position the pelvis is higher than the chest, and in attempting to replace the displaced womb the favoring influence of gravitation is thus secured. If gentle but firm pressure be then made



on the uterus it will slip into or near its proper place, provided the womb is not bound down by adhesions. In order to keep the organ where it ought to be a globular wad of cotton wadding, moistened with glycerine should then be placed in the upper part of the genital canal. The cotton acts as an effective internal supporter. It should be renewed daily. Before replacing a fresh wad of cotton, either of the following injections if used will do much to cure leucorrhœa, give tone to the relaxed walls of the passage and effect a cure.

- 104 R. Powdered smooth sumach bark .....2 ounces.  
 Powdered bloodroot..... $\frac{1}{2}$  ounce.  
 Boiling water.....3 pints.

Infuse one hour ; strain and use for one injection.

- 105 R. Powdered cranesbill..... $\frac{1}{2}$  ounce.  
 Powdered witch hazel.....1 ounce.  
 Warm water.....2 pints.

Infuse half an hour ; strain, and use for one injection.

#### POLYPUS OF THE WOMB.

Many varieties of this kind of uterine tumor are described by medical authors, but in a book for popular use we shall consider them all under one head, as the symptoms and the home treatment for all practical purposes are the same for every kind of polypus. The shape of uterine polypi vary, some are pear-shaped, being attached to the womb by a long cord-like pedicle, others are flat, clinging to the surface from which they grow by a broad base. Sometimes the mucous membrane is strewn all over with minute polypi, scarcely larger than the head of a pin ; their size is, however, usually much larger, varying from that of a pea to a



cherry: some specimens of uterine polypi have been observed as large as a hen's egg.

They may be attached to any part of the interior of the womb from the fundus to the mouth.

*Symptoms.*—At first these are not very well marked, but as the polypus increases in size the symptoms may become alarming. The primary effects of the growth are to excite congestion of the mucous membrane lining the womb, causing discharges of the glairy, whitish character, common to uterine leucorrhœa. Pain in the back, loins and above the pubic bone, similar to that observed in uterine disorders of an inflammatory character, are very constant and distressing symptoms. One of the most frequent signs of the presence of a uterine polypus is profuse menstruation, amounting in many cases to copious, occasionally fatal hemorrhage. As the growth increases in size, and sometimes when it is still very small, the hemorrhages occur at other than the menstrual seasons, the losses of blood becoming more frequent and excessive.

Under these circumstances the patient becomes weak, nervous and bloodless. One of the most constant symptoms is a dark red, almost black, tarry looking liquid, that appears for the first day or two at the beginning of the menses: this is afterward replaced by thin, bright red, liquid blood, that usually continues to flow until active measures are adopted to stop it. Nausea and vomiting are occasionally observed, caused by sympathetic irritation reflected from the uterus to the stomach in the same way as it is produced in early pregnancy.

Conception may occur, but is not likely to do so, while the uterus is occupied by a polypus; pregnancy,



however, rarely if ever, continues to the full term. Abortion may be expected about the end of the third or fourth month.

In rare cases polypoid growths of small size, but having a long pedicle, cause painful menstruation of the severest character by falling down on the internal exit from the womb, and, like a ball valve, mechanically obstruct the outflow of menstrual blood.

*Treatment.*—Sometimes nature effects a cure of these growths, by causing the uterus to contract on them with so much force as to cause their ejection from the womb. Or ulceration may take place and the polypus be sloughed away. In rare cases there is deposited in the tissue of the tumor, a mineral matter by which it becomes hard and its blood circulation and vitality are thus totally destroyed. Neither of these favorable results can, however, be expected with much confidence. In the great majority of cases increasingly copious and frequent hemorrhages will destroy life, if effective treatment be not adopted. When the menses appear, the case must be closely watched, and whenever the character of the discharge changes from true menstrual fluid or a thick, almost black fluid to thin red blood, particularly if the flow steadily increases, it should be promptly arrested by the use of the following remedies as directed :

106 R. Tannic acid .....2 drams.  
Powdered gentian.....1 dram.

Mix the powders.

107 R. Dried and powdered sulphate of alumina.....1 ounce.

A heaped teaspoonful of either the above preparations should be tied up in a small muslin bag and placed



against the neck of the uterus: after which the vagina should be filled with a long ribbon of soft muslin or wads of cotton batting. After twelve hours these should be removed to see if the flow of blood has been stopped; if the hemorrhage has ceased, very well; if not, the operation should be repeated as often as may be necessary. During the intervals between the menses, the following remedy should be taken with the hope that the medicine will cause the uterus to contract on and expel the polypus:

108 R. Fluid extract ergot.....2 ounces.

Twenty drops one hour before meals in water.

If the above treatment does not succeed, a cure can only be attained by skillful surgical treatment.

#### FISTULÆ OF THE FEMALE GENITAL ORGANS.

These consist mainly of two varieties, vesico-vaginal fistulæ or unnatural openings between the bladder and the vagina, and fæcal fistulæ or openings through the wall separating the rectum and the middle passage.

*Causes.*—Both kinds of fistulæ are the effects of the same sort of causes, the most frequent of which is prolonged pressure of the child's head in severe and difficult parturition. Sometimes these unfortunate perforations are caused by the careless and improper use of instruments in the hands of physicians while endeavoring to terminate such labors successfully.

Although fistulæ undoubtedly sometimes occur in this way the neglect to use forceps in time during severe labors and relieve destructive pressure before serious mischief has been done is far more frequently the cause of fistulæ than the unskillful or premature use of midwifery forceps.



Occasionally the long continued pressure of pessaries in the vagina causes inflammation and ulceration resulting in an opening between the genital passage and the bladder, or the rectum.

*Symptoms.*—The most conclusive proof of the existence of a vesico-vaginal fistulæ a patient can have is the escape of urine by the vagina. Sometimes the quantity is very small, in other cases it is so large that there is no necessity of passing any by the natural outlet.

In some the abnormal flow of urine is observed only when the patient stands up, in others only when she lies down; these variations are governed altogether by the situation of the fistulous opening. The passage of urine through the vagina and over the external parts causes irritation, inflammation, and itching eruptions. In spite of the utmost cleanliness the patient's body exhales a highly characteristic offensive ammoniacal odor.

The prominent symptom that attracts a patient's attention who suffers from fæcal fistulæ will be an escape of gas or fæcal matter from the genital passage; the amount being governed by the size of the opening between the middle and the back passages.

A sketch of this very distressing difficulty is inserted so that sufferers may be enabled to determine the nature of their disorder. A cure can be attained only by a surgical operation of great delicacy preceded by carefully conducted preliminary treatment.

#### TURNING OF THE WOMB INSIDE OUT.—INVERSION.

Inversion of the uterus is the rarest and most dangerous form of displacement. As the bottom of any bag may be pushed through its mouth, so may the bag-like



womb be turned inside out, the body of the organ descending down through its mouth into the vagina, or outside the vulva between the thighs. The mucous membrane formerly inside the womb is thus outside, exposed to view on examination, and a cup-like cavity is formed above containing the ovaries, fallopian tubes and part of the broad and other ligaments. As the walls of the non-pregnant womb are rigid and its cavity small, the grave accident under consideration occurs in this condition very rarely; but the recently delivered uterus is a large soft elastic bag, having a capacious cavity, with the walls proportionately much thinner, and a distended mouth. As these constitute a group of conditions eminently favorable to the inversion of the womb, we are surprised it is not turned inside out at child-birth more frequently than it is, the accident being very rare.

*Causes.*—As long as the non-pregnant uterus retains its natural size and texture this displacement is generally considered to be almost impossible; but when it is distended and softened, the conditions favoring inversion are present, and a very moderate power, acting in the right direction, is sufficient to turn it inside out. Thus in very short labors, when the pregnant womb is rapidly emptied, the body of the uterus may readily follow the child down through the neck; this is all the more apt to occur if the cord be too short, or is wound around the child's body; or if the medical attendant pulls rudely on the cord, or makes harsh and unskillful attempts to extract the placenta, he may bring the fundus of the womb down along with the afterbirth. There are some cases on record showing that the recently delivered womb may turn itself inside out



solely by its own irregular contractions. Tumors of various kinds, growing in the uterus, sometimes dilate its cavity, thin its walls, and drag by their weight on the part to which they are attached until the whole fundus follows, resulting in either complete or incomplete inversion.

*Symptoms.*—When inversion takes place suddenly it makes a profound impression on the sufferer; her face presents a death-like pallor, the body is bedewed with a clammy perspiration, her extremities become cold, her pulse rapid, weak, and fluttering, with profound prostration of the powers of life, resulting sometimes in fatal collapse.

Undue loss of blood at parturition is prevented by firm contraction of the womb, but when it becomes inverted after delivery the mouths of the torn blood-vessels are made to gape, therefore copious hemorrhage frequently accompanies the great disaster under consideration.

Immediately after a normal delivery, the hard, firmly contracted uterus can be readily felt through the wall of the abdomen about the size of a cocoa-nut; but if the organ has become inverted it will have disappeared from this situation, and will be found in the vagina or probably beyond the labia, presenting the appearance of a large, flabby, globular mass, perhaps having the placenta attached to it. If the inverted womb be not quickly replaced, the inversion soon assumes the chronic form, the uterus diminishes in size, and commonly disappears almost or entirely within the vagina. In the chronic state hemorrhages of greater or lesser amount may occur at irregular intervals; but there are usually considerable losses of blood at the menstrual periods,



heavy dragging pain in the back and loins caused by the tension of the ligaments and other parts attached to the womb annoy the sufferer. These unfortunate patients usually suffer much in walking and in evacuating the bladder and bowels. In some cases, women suffer wonderfully little from chronic inversion, in others the general health breaks up, and they become weak, nervous, and emaciated.

When the inversion occurs immediately after delivery, the uterus should be replaced with the least possible delay; if the attempt be made immediately, success may be promptly attained with very little difficulty, but experience has proved that the longer the operation is delayed, the greater are the difficulties and dangers attending its performance.

Replacing an inverted womb of long standing is always a serious undertaking, and is often impossible without an operation that may involve the patient's life.

#### PELVIC CELLULITIS AND PELVIC ABSCESS.

The female pelvis is occupied mainly by the rectum, vagina, and the womb: between these organs many nooks exist all of which are filled with what anatomists call cellular or connective tissue, acute inflammation of which constitutes pelvic cellulitis. It is, in fact, an extensive boil occurring deep down in the pelvis.

*Causes.*—In the majority of cases pelvic cellulitis occurs as either a result of child-birth or abortion. The puerperal state is doubtless the most fruitful predisposing cause, but the immediate exciting causes are exposure to cold, wet, and fatigue. In some persons it seems to be due to a peculiar morbid blood state that predisposes those in whom it exists to suffer from in-



inflammations of the cellular tissue in this as in other parts of the body.

Direct injury or surgical operations on the pelvic organs sometimes cause it in non-pregnant women, particularly if they labor under the boil producing condition of the blood already mentioned, or suffer from some chronic inflammatory, uterine, or ovarian disorder.

#### PROGRESS AND TERMINATIONS.

Shortly after the inflammatory process begins the diseased part becomes as hard as a board by the effusion of serum from the blood into the meshes of the cellular tissue. If skillful treatment be adopted at this point the disease may be effectually checked; the hardened parts will soften by the absorption of the effused matter, and the diseased cellular tissues return to their healthy condition.

But if the inflammatory action continues the effusion will increase until the pelvic organs are bound together as firmly as if the cellular tissue had been converted into cartilage. After a few days, suppuration sets in forming a pelvic abscess. When matter is imprisoned in the pelvic cellular tissue it dissects its way out more slowly, it is true, but far more neatly than the work could be done by the knife of the anatomist. In doing so the matter follows the easiest course to an outlet. If the abscess be situated in front of the womb the pus is apt to discharge into the vagina; if behind the uterus, it usually finds an outlet into the rectum; or after long burrowing may appear at the groin, above the pubes or near the anus; in rare cases a fatal result has attended a rupture of the peritoneum by the advancing matter being discharged into the abdominal cavity.



*Symptoms.*—The acute form of pelvic cellulitis occurring after confinement is usually ushered in by notable constitutional disturbance ; a chill of varied severity is almost always the first symptom, followed by fever, frequent pulse, hot dry skin, headache, muscular soreness, and much general irritability and restlessness. The pain radiates from the diseased part in all directions, rendering it difficult for the sufferer to locate the painful spot. The distress is often very severe when the patient keeps quiet in bed, but is apt to be increased if she tries to stand up or walk. Emptying the bowels or bladder is always difficult and sometimes impossible from the very severe pain caused by the attempt.

These symptoms may continue for a longer or shorter time according to the extent and severity of the inflammation going on inside the pelvis. If it ceases without proceeding to the formation of an abscess, they all gradually diminish, and finally disappear. If the disease proceeds to suppuration, the pain assumes a throbbing character, and the chills by which the disease was commenced often recur, due to the disturbing influence of the imprisoned pus on the system.

*Treatment.*—Perfect rest is of the very greatest importance : the patient should not be permitted to get out of bed, or even to sit up for any purpose whatever. The chief object we should strive for is to prevent the undue accumulation of blood in the pelvis, and to draw away that which is occupied in congesting the newly diseased part. This can be accomplished, to some extent, with bottles filled with hot water securely corked, and covered with warm, moist flannels. As soon as the temperature under the bed-clothes is sufficiently elevated, perspiration begins, and with the moisture the



blood flows toward the surface of the body leaving less to do mischief internally.

After the patient has been made to perspire freely by this means, the bottles should be removed, and a large, hot poultice of hops freely sprinkled with the tincture of opium should be applied over the lower part of the abdomen and vulva. If the bowels be loaded when the inflammatory pain begins, they must be relieved by means of an enema, because the presence of large masses of matter in the bowels will do much to frustrate efforts made to cut short the disease in the incipient stage. Cathartics, however, must not be administered, at least during the acute stage ; their action directly and powerfully favors the development of the inflammation. In addition to these measures, copious injections of water as hot as it can be comfortably borne should be thrown into the vagina in a gentle but steady stream while the patient lies on her back in bed, the escaping water being caught in a bed-pan.

Prescription 109 should be used as directed in order to continue the perspiration excited by the hot bottles and poultices.

109 R. Asclepin.....	30 grains.
Veratrin.....	2 grains.
Dover's powder.....	40 grains.

Triturate the above together, and divide into fifteen powders. One powder may be given every two or three hours in a little sweetened water. These measures, diligently employed for a day or two, will often succeed in cutting short severe attacks of commencing pelvic cellulitis ending in abscess. But if the painful symptoms be not quite subdued, or if they offer to return after the treatment is discontinued, then it is likely the



inflammation will go on to suppuration. Under these circumstances a skillful surgeon must be consulted who will employ treatment that cannot be used by inexperienced persons.

INFLAMMATION OF THE PERITONEUM COVERING THE FEMALE GENITAL ORGANS.—PELVIC PERITONITIS.

The peritoneum is a serous membrane of great extent, covering all the organs in the abdominal cavity. Any part or all of it may become inflamed, constituting local or general peritonitis. The disease under consideration is a peculiar variety of peritonitis, limited to the pelvic peritoneum covering the female genital organs, and presenting a special group of symptoms.

*Causes.*—When inflammation takes place in the pelvic cellular tissue, it may and often does spread to the peritoneum adjacent to the incipient abscess. We may thus have the disease we are here considering, caused by and complicating pelvic abscess described in the preceding chapter. It is often the result of parturition or abortion, particularly if the patient's health has previously been bad, or if the labor has been very severe, requiring the use of instruments, or if she has been exposed to cold and fatigue soon after confinement. When criminal abortion results fatally, peritonitis is almost always the immediate cause of death. The inflammation of specific vaginitis may and sometimes does creep up through the womb and along the fallopian tubes to the peritoneum, where it lights up a very serious, perhaps fatal inflammation. The affection under consideration has been caused time and again by injected fluids thrown into the womb for the cure of diseases of that organ, finding their way to the peri-



toneum with the same inflammatory results that are observed in specific vaginitis. Finally, exposure to cold during menstruation may very often be justly credited with the production of pelvic peritonitis.

*Symptoms.*—The disease we are now considering may begin either as an acute or chronic attack. Usually it assumes the acute form at first ; if it be not cured while in this condition, it necessarily after a time passes into the chronic variety. When pelvic peritonitis is caused by some other uterine disease, it is often chronic from the first. Under these circumstances the symptoms are not well marked. Shortly after child-birth, miscarriage, or during menstruation, the patient will usually suffer severe cramping pains in the lower bowels, which she thought at the time were caused by colic, or an impending attack of diarrhea ; but the effects have never quite passed away. She suffers pain in walking, or using sewing machines : her menses are now accompanied by pain, and are often too profuse ; leucorrhœa is also a frequent symptom.

The symptoms of the acute variety are more decided and severe. A chill of varying intensity, amounting in some cases to a severe fit of shivering, is observed ; in others the rigor is so slight as to attract little or no attention, until the patient's notice be called to it while replying to the doctor's questions. In some cases the pain is quite moderate ; in others it is of the most agonizing kind : it may be very severe from the first, or may be preceded simply by uneasiness and weight. The whole abdomen will be excessively tender, so that the weight of the bed-clothes cannot be tolerated ; the patient instinctively draws up her knees to get ease by relaxing the muscles of the abdomen. The pulse is



small and wiry, presenting the peculiarities usually observed in peritonitis. Nausea and vomiting are usually observed. The face presents an anxious, pinched expression, dark circles form around the eyes, and the mind is often disturbed by mild delirium.

*Treatment.*—In all acute cases, this disease is dangerous to life, or if it be not quickly fatal, it is so apt to run into the chronic form when not promptly and skillfully treated, that an experienced physician should always be employed.

With the chronic variety better results can commonly be obtained by home treatment. If gentle exercise be not injurious, fresh air may be taken by walking or riding; when practicable, the latter is to be preferred. But if the pain be increased thereby, perfect rest must be enjoined. But recovery cannot be expected if the chronic sufferer be cut off totally from the benefits of exercise. If she cannot herself exercise actively, she must be exercised passively by daily rubbings, kneadings, and fullings of all the muscles, after the fashion of the movement cure, or the method now known as massage.

By this means the blood circulation and nutrition are maintained, these being the fundamental essentials of cure. The diet should be of the most nutritious character, and wines or ales may be used in very moderate quantities, with the meals only, preferably at dinner. Change of air is often signally beneficial. If the patient has long resided in the interior, removal to the salt-water will do her good. On the contrary, if her residence be near the sea, a stay among the mountains will often be of signal service.

If the patient be married she should live apart from



her husband, otherwise the cure will be much more difficult. Warm hip-baths, not to exceed ten minutes in duration, accompanied by vaginal injections of water while the patient is sitting in the bath, are very soothing and curative.

If the patient be pale, weak, and bloodless, the quality of the vital fluid will be improved by the use of prescriptions 110, 111, and 112.

- 110 R. Syrup of the iodide of iron ..... 2 ounces.  
Tincture of iodine.....30 drops.

Ten drops in sweetened water after meals.

- 111 R. Ammonio citrate of iron.....40 grains.  
Fowler's solution.....30 drops.  
Syrup of ginger..... 2 ounces.  
Infusion of calumba to make..... 4 ounces.

One teaspoonful after meals.

- 112 R. White Norwegian cod liver oil.....8 ounces.  
The yolks of two eggs .....  
Syrup of the lacto phosphate of lime.....2 ounces.  
Dilute phosphoric acid.....2 ounces.  
Whiskey... ..4 ounces.

Shake the bottle thoroughly, and take one tablespoonful twice a day after meals until recovery be complete.

#### HEMORRHAGE INTO THE PELVIC CELLULAR TISSUE.—PELVIC HEMATOCELE.

As before stated, the pelvis contains very much loose cellular tissue, filling up all the odd corners between the various pelvic organs.



If a blood-vessel ruptures and the blood therefrom flows into this loose tissue, it yields and becomes distended almost as easily as if the blood flowed into an empty bag. A collection of blood occurring in these circumstances and in this location, or into the peritoneum after being encysted, constitutes a pelvic hemothorax. The blood remains fluid for a time after being effused, then it undergoes coagulation slowly as it is not exposed to the action of the air. The liquid portion of the coagulum is afterward absorbed, leaving a hard lump composed of the solid matter of the blood, which may remain and become encysted doing little or no harm, or it may find its way out by ulceration into the rectum, the vagina, or unfortunately into the peritoneum. The most favorable result that can possibly occur is the complete absorption of the whole mass. Nature occasionally effects a cure in this way.

*Causes.*—A much larger quantity of blood flows into the pelvic organs during the years in which a woman menstruates than either before the young girl begins or the middle-aged lady ceases; this condition favors the occurrence of hemorrhages into the pelvic tissues. We accordingly find that the disorder under consideration occurs only during the child-bearing period, and a large majority take place while menstruation is actually in progress. The capacity of the vessels to resist the blood pressure to which they are subjected depends on their strength: accordingly we find that when the coats of the vessels are weakened by general, or more especially by local chronic disease, ruptures occur very readily and the hemorrhage is usually more copious. The influence of violence of any sort in causing hemorrhages, particularly if the walls of the vessels be in the friable



condition often found in middle and advanced age, is so evident as simply to require mention. Sudden checking of the menstrual flow by cold is not unfrequently quickly followed by rupture of the overcharged blood-vessels and the formation of a blood tumor either in the pelvic cellular tissue, or in the peritoneum itself, the latter constituting a distinct variety of hematocele.

*Symptoms.*—The gravity of the symptoms presented by the patient at the time of the pouring forth of the blood depends very much on the quantity of blood lost, and are of the same character as if the vital fluid flowed externally with the exception of the latter symptom. The disorder commonly occurs suddenly without any premonitory warning. When the tumor formed by the effused blood has attained adequate size, the patient suffers severe pain in the pelvis, accompanied in a longer or shorter time, according to the extent of the hemorrhage, by coldness of the skin and extremities with faintness or in extreme cases by collapse. Nausea and vomiting are commonly caused in this disease by shock to the system and the sudden withdrawal of blood from the nervous centers. The acute pain by which the attack was ushered in is now replaced by a dull heavy ache, and the patient becomes conscious of the presence of some heavy body in the pelvis, which she instinctively desires to expel. If the loss of blood has been considerable, the sufferer manifests exhaustion with paleness and cold perspirations. If the blood tumor be large, the action of both the bowels and the bladder may be obstructed by pressure. Fever is never present.

*Treatment.*—To limit the loss of blood is the first and most urgent necessity; this may be best accomplished



by putting the patient to bed and removing her clothes with the least possible disturbance of her person. A rubber bag filled with pounded ice should be laid over the lower part of the abdomen and on the thighs. A few doses of prescription 113 will assist in contracting the blood-vessels and in checking the hemorrhage.

113 R. Fluid extract ergot.....2 ounces.

Thirty drops in water every hour until three or four doses have been taken.

If the internal hemorrhage has been severe the patient may be in danger of sinking into fatal collapse. To prevent this disaster, whiskey, brandy, or champagne should be given freely until the patient rallies. In the meantime a physician should be summoned, to whom the subsequent treatment must be intrusted.

#### FIBROUS TUMORS OF THE WOMB.

These tumors consist mainly of an undue growth of the natural tissue of the womb, mainly of the fibrous portion: hence their name. They are the most common of all uterine tumors, but are found with special frequency among middle aged and old colored women. They are not malignant, and never give rise to cancer; but the latter disease may invade a womb already the seat of one or more of these benign growths.

The number of fibrous tumors sometimes observed growing from a single womb has varied from one to thirty-five; and the size from that of a cherry to a cocoa-nut.

Individual tumors have been found weighing from twenty-five to fifty pounds each. They may grow from any part of the womb, but are in the vast majority of



eases attached to the body or fundus. Fibrous tumors may project from the womb into the abdominal cavity, being then covered by the peritoneum; they may develop in the thickness of the uterine walls, or may grow from the inside of the uterus and enlarge its cavity by pressure. The texture and density of fibroid tumors differ very materially; some are soft and fleshy like a firm polypus, but many are so hard that they cut like cartilage, yielding a creaking sound under the knife.

Their natural diversity of structure is still farther increased by a variety of diseases to which these tumors are themselves subject. Sometimes they become dropsical, doubtless from some obstruction to their blood circulation. Inflammation occasionally attacks them. They may be destroyed by fatty degeneration, or be slowly converted into a jelly-like mass, and in rare cases acquire a stony hardness by the deposit in their substance of calcareous matter. When this favorable change occurs, a natural cure is often attained by their separation and extrusion from the womb. They are attached to the uterus either by a broad base or a long flexible pedicle. The latter variety, when growing into the abdominal cavity, have sometimes become detached from the uterus by the breaking of the stalk, after which they have rolled about in the abdomen loosely for a time; but eventually adhesive inflammation has been excited by which they have been glued to some other and occasionally distant organ. In rare cases they are destroyed by ulceration resulting in a spontaneous cure.

*Complications.*—When fibrous tumors develop in the womb and project into its cavity, they cause irritation and inflammation of its mucous membrane. From what



has been said elsewhere about the manner the womb is supported in its place, it is evident that if its weight be increased displacements must occur. Fibroid tumors are therefore a frequent cause of downward and other dislocations of the uterus. By mechanically preventing the return of blood from the rectum to the general circulation, congestion of the lower bowel is caused, resulting in the development of piles, sometimes of an aggravated character. In cases where these tumors acquire a large size they often interfere with the functions of the rectum and the bladder by pressure.

*Symptoms.*—As the growth of fibrous tumors is usually slow, few or no symptoms are occasioned by them, until they have attained to perhaps the size of the uterus itself, or even larger, and not always then; because the pelvic organs have, in the meantime, gradually become accustomed to their presence. When they have attained a sufficient size, the patient will complain of weight in the pelvis, a distressing bearing down feeling in the womb, and aching in the back and down the thighs. After the tumor becomes large it makes pressure on the rectum and bladder, obstructing the evacuation of their contents and producing a painfully frequent desire to do so which is not relieved by the attempt.

Pressure by large uterine fibroids on the nerves in the hollow of the sacrum may cause painful cramps in the lower extremities, and, by obstructing the flow of venous blood, often causes dropsy of the same parts.

The presence of these tumors almost always interferes with the menstrual function; it usually becomes irregular; sometimes the monthly discharge is suppressed or it becomes too copious, often accompanied by agonizing pain; while in many cases copious discharges of pure



blood take place from the womb at irregular uncertain periods. Profuse leucorrhœa is a frequent source of debility and annoyance, and a copious watery discharge from the womb is not uncommon. Although conception may take place, gestation is usually terminated before the end of the third month, but may go on until the full time, uninfluenced by the presence of the tumor, which, however, may offer serious obstruction at child-birth by blocking up the maternal passage and preventing the descent of the child's head.

*Treatment.*—Palliative measures are all that can be attempted at home. If the patient's health be undisturbed, and she is not inconvenienced very much by the size of the tumor, nothing should be done beyond keeping the general health as good as possible.

Riding on railways and rough roads is apt to cause irritation, and perhaps inflammation: these causes of mischief should therefore be avoided as much as possible. When the tumor is large enough to cause inconvenience by pressing on the rectum and bladder, much relief may be obtained by regularly emptying these viscera. Constipation is to be very carefully avoided. Cramps and dropsical effusions in the legs may often be relieved by the use of a properly adjusted abdominal supporter.

Leucorrhœa may be remedied by copious vaginal injections of water, or better still, by the use of one or other of the following prescriptions:

114 R. Powdered alum.....1 dram.  
Tepid water.....1 quart.

Dissolve the alum in the water.

Use the whole for one injection.



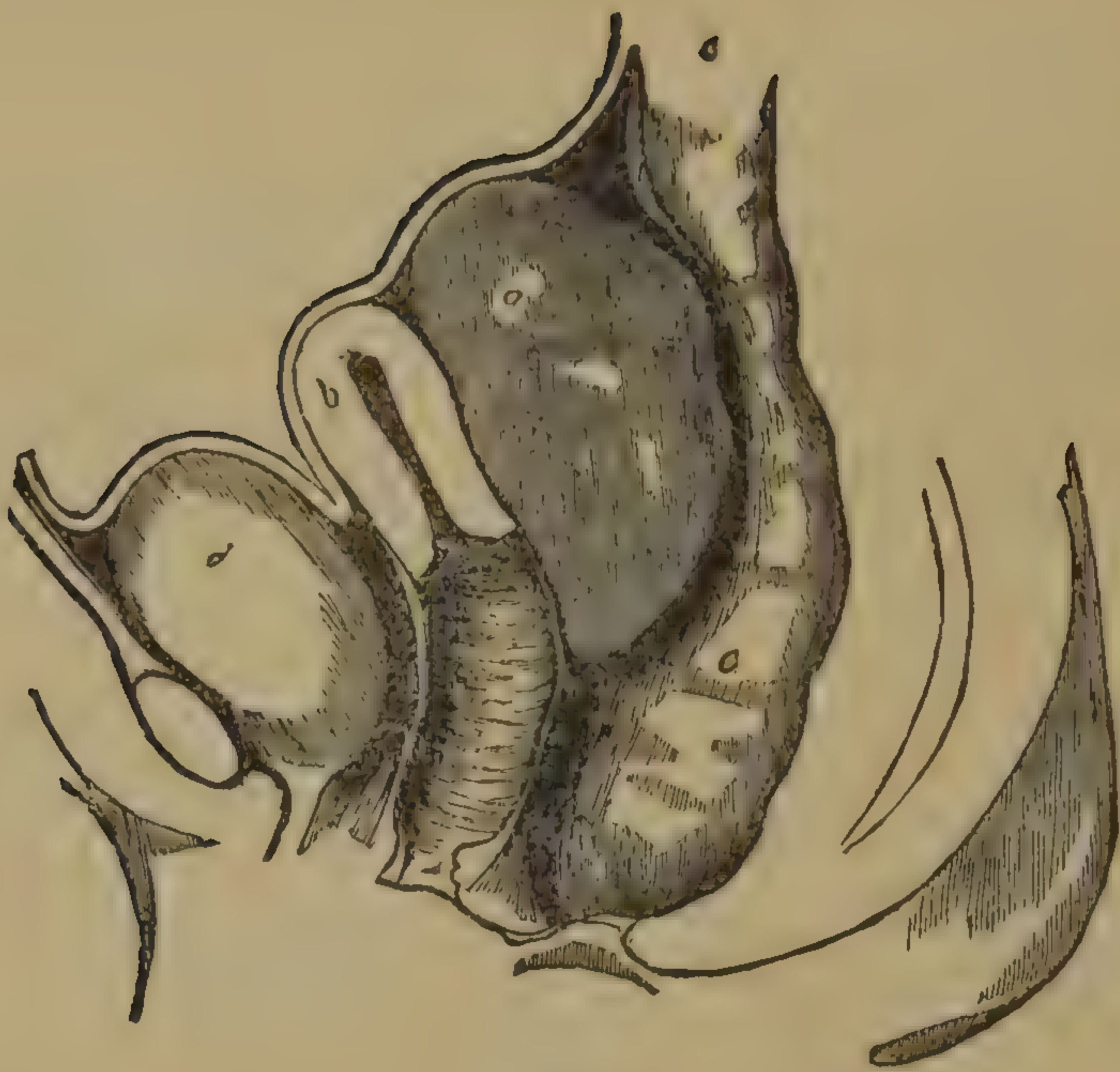


Fig. 25.

FIG. 25. Indicates the size and position of blood tumors, which are due to the rupture of a blood vessel in the pelvis, usually about the menstrual periods. *D* is the bladder; *B* is the womb; *A* is the tumor, and *C* the rectum.

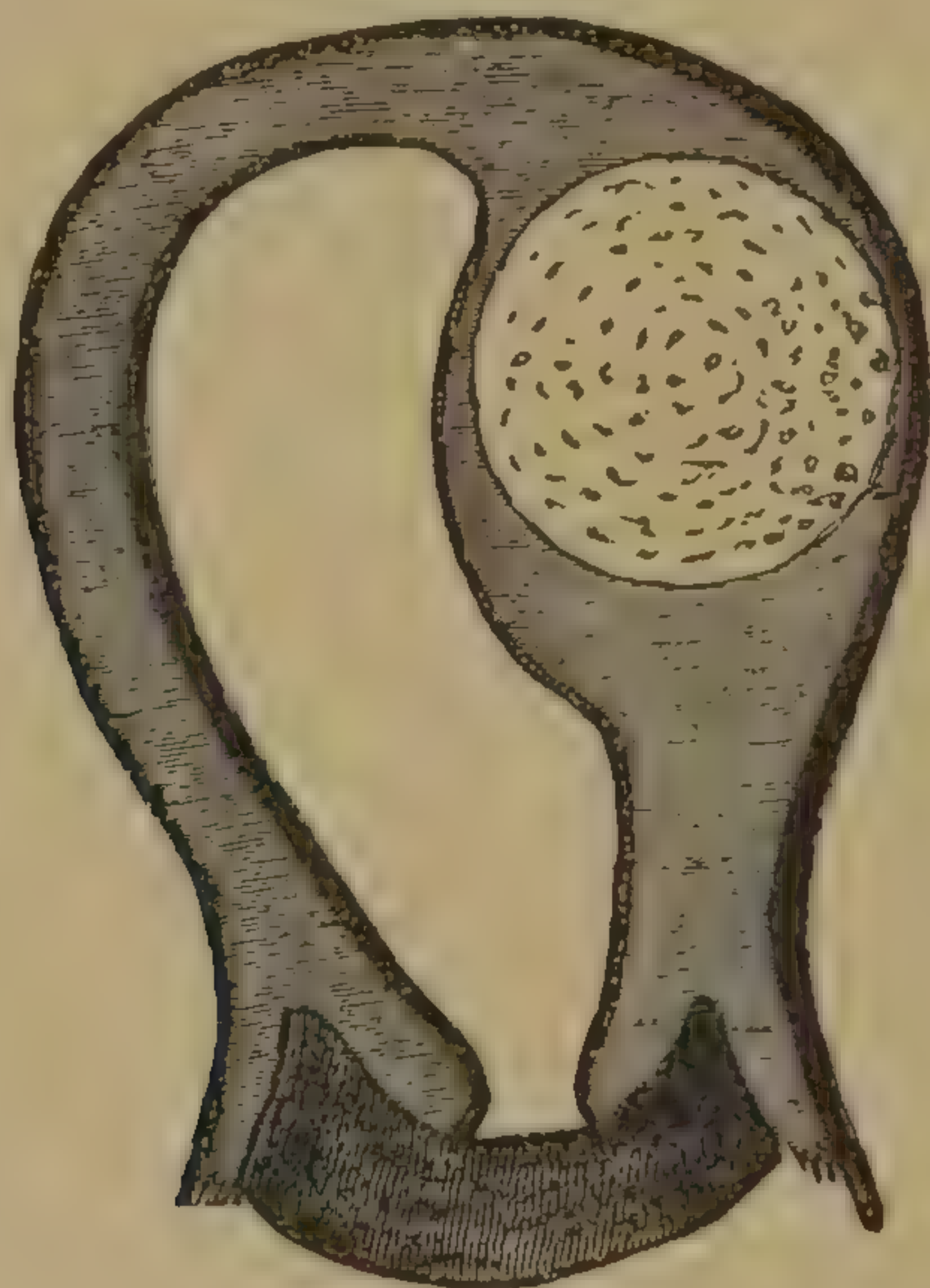


Fig. 26.

FIG. 26. Illustrates the development of fibrous tumors, which frequently grow under the membrane covering or lining of the womb, or in the thickness of its walls. The latter is the condition represented in the engraving.





FIG. 27. Is a representation of a condition that occurs not very unfrequently. In these cases, after the egg has been fecundated, it goes through a proper career of development up to a certain point; then, instead of becoming a child, it grows to be a mass of globules strongly resembling white currants.

Fig. 27.



Fig. 28.

FIG 28. Shows how cancerous masses are sometimes concealed inside the womb, giving no external indication of their presence until the disease is far advanced.



- 115 R. Sulphate of zinc.....1 dram.  
 Tepid water.....1 quart.

Dissolve the remedy in the water.

Use the whole for one injection.

- 116 R. Geddes' extract of hemlock..... 1 ounce.  
 Strong carbolic acid.....30 drops.  
 Tepid water..... 1 quart.

Mix thoroughly ; use the whole for one injection.

If copious hemorrhages occur they may be controlled by plugging the vagina with wads of cotton batting. If dangerous symptoms arise in spite of these measures, surgical treatment alone will prove curative. After the menses disappear, fibrous tumors always diminish in size and largely cease to be a source of annoyance and danger.

#### CANCER OF THE WOMB.

It would serve no useful purpose to perplex the reader with a separate description of the many existing forms of cancer, as the palliative home treatment of all is substantially the same. There are several disorders of the womb that somewhat resemble cancer, and are occasionally mistaken for it ; the latter are, however, readily cured by suitable remedies, but we regret to say a successful treatment for genuine cancer of the womb, after it has made decided progress, has yet to be discovered. Statistics prove that cancerous disease is nearly three times more frequent in women than in men ; and the womb is attacked about thrice as often as any other female organ. Some eminent pathologists claim that cancer is originally a disease of the blood, and the local ulcer is simply an expression of a previous morbid blood change. Others believe that cancer is



originally a local disorder, and the blood is only secondarily affected. Therefore the question of the exact origin of cancer of the uterus is still undecided. The weight of authority, however, inclines strongly to the latter view. Cancer may attack any part of the womb, but it selects the neck in the very great majority of cases. A very fortunate circumstance, as it is there readily accessible to examination and treatment. From this part it spreads upward and downward, successively attacking the vagina, the body of the womb, the ovaries, and perhaps adjacent pelvic tissues. The first appreciable change is a deposit in the part by which it is hardened. After a longer or shorter time ulceration takes place at this point giving rise to a fetid, bloody, ichorous discharge that excoriates all the healthy parts with which it comes in contact. The progress of the malady is marked by continued extension of the hardening process followed by ulceration, which continues until, before life is extinct, the interior of the pelvis is often one mass of disease, and the uterus, the walls of the vagina, rectum, and bladder have been nearly destroyed. Although cases have occurred, both in very young and in aged women, it is very rare before twenty and after sixty years of age. The large majority of cases are observed between the ages of forty and fifty.

*Causes.*—The causes of uterine cancer are not well understood; that is to say, we cannot always tell why one middle aged lady is attacked by the disorder under consideration when another, who may be apparently much less vigorous and healthy, escapes. It has been observed, however, that women are more apt to be attacked by cancer whose immediate ancestors have suffered from it; therefore, hereditary taint seems to



have some influence in causing the disease. There is no doubt about the powerful malign influence of prolonged grief and other mental distress in this direction. In almost every case of cancer that has come under our observation, the patient had suffered for many years the miseries of matrimonial discord. As already intimated cancer is observed most frequently about the time of life when the menses naturally cease; it is therefore highly probable that the changes then occurring in the female constitution favor the development of this justly dreaded disease.

*Symptoms.*—The progress of uterine cancer is at first most insidious. The symptoms that characterize it then are very slight. The disease may be well advanced before any symptoms are developed that attract the serious attention of the patient, and lead her to consult a physician. We believe that substantial success would be attained if the treatment of this disease were begun at the proper time. Pain and tenderness are present in the great majority of cases, but in very rare instances both are entirely absent. The symptoms observed at first do not differ from and are very often less severe than those due to some benign uterine disorder. The earliest symptom is often some derangement of the menstrual discharge, sometimes the quantity is increased, and it occurs as often as every one, two, or three weeks, or the flow may be retained beyond the natural time; in some cases it ceases altogether. This is of itself rarely a source of alarm, because middle aged ladies expect just such irregularities. As the disease progresses the discharge becomes ichorous, fetid, watery, and brownish. These characteristics are not commonly observed until ulceration has made some



progress. The advance of the disease is signalized by dull aching pain in the back with a distressing feeling of weakness. As the disease progresses the pains become more acute assuming a burning or lancinating character as if sharp knives were being darted through the parts. Severe shooting pains may also extend down the legs and backward to the anus, with a sense of fullness in the lower bowel, leading the sufferer to think she has a severe attack of the piles. In those rare cases where no uterine sufferings are present the patients are usually tormented by agonizing pains in other parts of the body; seemingly all the more severe because the womb itself is exempted. The suffering may be very great in the lower part of the abdomen, the back, groins, and hips; and it is especially severe down the sciatic nerve, constituting sciatica of terrible intensity. Very fortunately the suffering is not continuous, but usually occurs in paroxysms of variable duration, with seasons of comparative ease intervening. The leucorrhœal discharge may be occasionally streaked with blood at a very early period in the progress of the disease, but decided hemorrhages do not, as a rule, occur until after ulceration has made notable progress. In some instances the loss of blood may precede the severe pains, but this is not usually the case. Elderly ladies whose periods have ceased naturally, years before, sometimes mistake a hemorrhage caused by cancer for a return of the menses. Even medical men have been deceived by this deceptive symptom, and have treated a discharge of blood due to advanced cancer as profuse menstruation. The local loss of blood often notably relieves the sufferer for a time from the painful symptoms, but the repeated and copious hemorrhages



exhaust the patient, and hasten the fatal result. Very often before death closes the scene, progressive ulceration forms openings into the bladder or rectum, or both; when this occurs their contents escape into the vagina, and constitute a new and fearful source of irritation to parts already absolutely raw, greatly increasing the hapless woman's sufferings, and rendering her a disgusting object both to herself and those around her. The general symptoms are scarcely less distressing. As the disease progresses the patient becomes emaciated, the eyes sunken and surrounded by dark circles, the features are pinched by severe suffering, the color of the skin darkens, and it seems to adhere to the bones. After several copious hemorrhages have occurred, the circulation becomes hurried, and the pulse small and frequent. In the later stages hectic fever and night sweats are common. The appetite gradually fails, and ultimately ceases; indigestion with nausea and vomiting distress the sufferer. Constipation alternates with diarrhea, the latter accompanied by intense thirst. The work of destruction commonly continues until death closes the scene.

*Treatment.*—As soon as a lady has the slightest reason to think herself affected with cancer, she should procure an opinion from the ablest and most candid physician whom she can reach, at the earliest possible moment, in order to get the advantage of an accurate diagnosis and suitable treatment when there remains the best chance to attain complete and lasting success. When cancerous disease is well advanced there is usually very little difficulty in forming a just estimate of its nature, but in the earliest stage before ulceration has occurred cancer is easily mistaken for induration arising from sim-



ple causes, such as pelvic cellulitis, etc. On the other hand, the latter disorders have been regarded as the beginnings of malignant diseases. As long as cancer continues in the first stage it gives rise to few or no symptoms, and the woman is comparatively safe and comfortable. We should therefore give diligence to prevent it proceeding any further if possible. To attain this end every hygienic influence should be brought to bear on the patient; all sources of mental distress and worry must be removed. Change of air and scene are very often an effective renewer of life. The glandular system should be gently stimulated to purify the fluids and solids of the body by the use of prescription 117.

- 117 R. Fluid extract yellow dock.....4 ounces.  
 Fluid extract blue flag.....3 drams.  
 Fluid extract poke root.....1 dram.

Half a teaspoonful to one teaspoonful in water one hour after meals.

By the use of the preceding remedy, the blood may be effectively purified. If the patient be sallow and bloodless, the following preparation will be of service to enrich the blood and improve the appetite, and may be alternated every other week with prescription 117.

- 118 R. Soluble citrate of iron.....40 grains.  
 Fowler's solution.....30 drops.  
 Tincture nux nomica ..... 2 drams.  
 Glycerine ..... 1 ounce.  
 Catawba wine to make ..... 4 ounces.

Daily warm hip baths to relieve the pelvic congestion, and occasional Turkish baths or water-cure packs to keep the skin in active condition are useful. If con-



stipation exists, articles of diet having a laxative effect should enter into the daily diet. But if relief be not obtained by these simple means, the bowels must be stimulated to action by suitable enemias. If a laxative medicine be required, the following will be found both effective, palatable and fragrant, although its appearance may not be very attractive:

119 R.	Powdered senna .....	6 drams.
	Powdered coriander seed .....	6 drams.
	Jalap.....	$\frac{1}{2}$ ounce.
	Powdered cream of tartar .....	$1\frac{1}{2}$ ounces.
	Powdered ginger.....	3 drams.
	Powdered white sugar .....	2 ounces.

Mix the powders. Take half to one teaspoonful stirred into water before retiring for the night.

The food must be of the most nutritious and digestible sort. The use of an abundance of pure rich milk, has a singularly good effect in some cases of cancer.

When ulceration has commenced accompanied by fetid, ichorous leucorrhœa and more or less of the grave symptoms already described, the treatment is more difficult and less hopeful, supporting measures should be continued more diligently if possible. Pain must be subdued by the use of prescription 120.

120 R.	Solid extract hyosciamus .....	1 dram.
	Powdered camphor .....	30 grains.

Divide into 24 pills. One or two pills when the pain is severe.

If the above remedy fails to afford adequate relief, some preparation of opium should be used in sufficient quantities to abate the pain.



Vaginal injections always afford these sufferers much comfort by checking discharges, correcting their fetor and preventing their irritating effects on the soft parts. Prescriptions 121, 122, and 123, will prove very effective.

- 121 R. Strong carbolic acid .....1 dram.  
Tepid water .....1 quart.

Mix the acid with the water. For one injection.

- 122 R. Solution of chlorinated soda .....1 ounce.  
Tepid water.....1 quart.

The whole to be used for one injection.

- 123 R. Solution subsulphate of iron.....1 or 2 drams.  
Tepid water.....1 quart.

Dissolve the medicine in the water, and use the whole for one injection.

#### CANCER OF THE BREAST.

This disease commonly begins as a well defined lump of small size, at first smooth, round, or oblong, with very little sensibility. It is readily movable; as it increases in size it becomes hard, and of a lumpy, irregular shape, manifesting a tendency to become attached to the adjacent parts—to the muscles beneath, and to the skin above. The surface soon begins to assume an irregular outline, to elevate the skin covering it, and to become the seat of severe shooting pains, particularly at night. The veins in the vicinity become prominent, blue, and dilated. At first the skin covering the lump is of the same color as the surrounding integument, but very soon after adhering to the tumor it assumes a reddish, purplish, or brownish color.



In the early stages of the disease the pain, if any, is very little, but as it advances the suffering becomes very severe, and is greatly increased by handling the breast. The pain radiates from the diseased part up the shoulder, and down the arm. Drawing in of the nipple about the time the tumor becomes attached to the skin is common.

The glands of the armpit become enlarged early in the progress of the disease, and the absorbent vessels leading from the breast to them may be felt like hard cords connecting the two. The treatment for the general building up of the sufferer's health, who is attacked by cancer of the breast, is the same as for those having a like disease of the womb. The reader is referred to the previous chapter for information on that point.

As surgical treatment alone is effective against cancer of the breast, we shall content ourselves by simply mentioning the various methods commonly employed to remove the disease.

For many years cancers of the breast were extirpated with the knife ; but there are good reasons for believing that in almost every case of true cancer, without exception, the disease returned and destroyed the patient. It did so, because the diseased tissues are never completely removed by the knife alone. The cancerous taint extends from the tumor all around into the apparently sound flesh like the halo about the heads of saints as seen in pictures. In this diseased flesh the seeds of cancer remain to develop their malignity sooner or later, usually sooner. In all cases when the wound made by the knife is allowed to heal as soon as possible after the operation, without exciting discharges therefrom, the cancer may be expected to return by the develop-



ment of the remaining cancer cells. The safest, surest, quickest, and least painful method is to extirpate all the diseased mass either by the knife or galvano-caustic wire ; after which the wound should be kept open, and made to discharge for one or two months in order to get rid of the cancerous taint remaining in the flesh after the knife has done its work. Cancers of the breast are removed very successfully exclusively by caustic plasters, and the purification of the diseased tissues is effected by the profuse discharges necessarily attending this method of operating. But it is slow and excessively painful.

In order that the reader may be able to distinguish cancerous from simple tumors of the breast, we shall conclude this chapter by recapitulating the chief points of difference. Scirrhus tumors are very hard, irregular, and knotty, having their limits well defined ; they are at first easily movable, but soon become fixed by anchoring themselves to the deeper parts ; this is a very significant symptom. In benign lumps the skin covering the tumors remains of the natural color, but may be thinned and stretched if they are of large size ; but in scirrhus tumors the skin soon adheres to them, so that it cannot be pinched up into folds. It loses its natural appearance and texture, assuming a dark, leather-like aspect. In simple tumors the position of the nipple is rarely altered, but in malignant growths it is almost invariably drawn downward and inclined toward the diseased part. In genuine cancers the veins on the diseased breast are often greatly enlarged. The pain is severe and stabbing, especially at night, or after the tumor has been handled. The glands of the armpit are enlarged, hardened, and fixed, and as the disease



advances the sufferer's health notably deteriorates. None of these characteristics attend simple growths.

WATER IN THE WOMB.—UTERINE DROPSY.

The secretion and absorption of mucus by the mucous membrane of the uterus when in health exactly balance each other, but when the membrane is diseased its secretion is altered in character, and often greatly increased in quantity. As elsewhere stated, the secretion of disease is commonly clear, ropy, tough, or jelly-like, and semi-transparent, resembling thin, half-boiled starch. In the disorder under consideration it is thin and watery. When the latter condition is present, and the mouth of the womb is occluded by any cause, the thin liquid secreted by the lining of the uterus must necessarily accumulate in and distend its cavity. This is a rare disorder, and is observed mainly in young or middle aged women. Some have erroneously supposed, from this fact, that it is connected with the generative function. The quantity of liquid contained in the uterus varies ; it however rarely amounts to more than one or two pints, because when that quantity is exceeded the uterus is commonly stimulated to contract on and expel its contents. Sometimes the organ has been distended by an accumulation of fluid to the size it attains at the full term of pregnancy ; and cases are related from which many pints of fluid have been removed at one tapping.

*Symptoms.*—As the absorption of the fluid goes on almost as fast as its secretion, it accumulates in the womb very slowly, giving time for the uterus to accommodate itself to the new situation without producing any very notable symptoms. The organ dilates with



special facility in women who have borne children, or who become affected with dropsy of the womb shortly after delivery. In elderly ladies the womb enlarges with difficulty, and the painful symptoms are developed more rapidly, and with greater severity. After a longer or shorter time the lower part of the abdomen enlarges very much as it does in early pregnancy, but the distending body is more movable and elastic than the pregnant womb.

As the accumulation increases, distress resulting from mechanical pressure is developed. The menses are suppressed, vaginal leucorrhœa is common, the urine is scanty and deposits a brick-dust sediment after standing a few hours. The breasts often enlarge and become tender as in pregnancy. At first the health is unaffected, but in the advanced stages it always breaks down, the pulse becomes small and frequent, the skin hot and dry, the tongue coated, the appetite fails, and the bowels irregular. The patient may die from exhaustion, or the walls of the womb being thinned and weakened by long continued distension may rupture and pour its contents into the peritoneum, causing fatal inflammation of that membrane. In some cases the mouth of the uterus is not completely closed, so that the fluid percolates away as it is secreted, or it may accumulate to some extent when the womb is excited to action by the presence of the fluid, and the liquid be forced out with a gush.

*Treatment.*—When the mouth of the uterus is completely closed so that none of the fluid can escape, but continues to increase steadily, the womb will ultimately burst and the patient die if relief be not afforded. Gentle manipulation, with pressure, is sometimes enough



to stimulate the womb to expel its contents. Prescription 124 is very valuable to continue and increase uterine action :

124 R. Fluid extract ergot of rye.....1 ounce.  
 Fluid extract ergot of corn.....1 ounce.

Thirty drops in water after meals. This remedy should not be taken continuously for more than eight or ten days. The patient may then intermit the use of the remedy for a week, after which it may be resumed.

In the majority of cases, however, the liquid will have to be drawn away by a surgical operation, after which the mouth of the womb should be dilated by sponge or sea-tangle tents to maintain an opening for the free escape of the liquid, and prescription 125 administered for some weeks to prevent its reaccumulation :

125 R. Fluid extract black Indian hemp.....1 ounce.  
 Three drops in water before meals.

#### AIR IN THE WOMB.—UTERINE TYMPANITIS.

By this term, we understand an accumulation of gas in the womb. It may be secreted by the lining membrane of the uterus, just as gas accumulates in the intestines ; it is secreted by the mucous membrane of the bowels. But it arises in the uterus more frequently from the decomposition of a bit of retained after-birth or a clot of blood. This disorder is therefore much more common after confinement than at any other period. Whenever air is imprisoned in the womb its mouth must be perfectly closed, otherwise the air would



escape as soon as secreted; this circumstance will necessarily cause a decided difference in the symptoms of the two disorders. Air is sometimes secreted in the womb, but instead of being retained so as to distend the organ, it escapes repeatedly, sometimes with an audible noise. When the gas is excreted by the otherwise healthy uterine mucous membrane, it is quite inodorous, but is always very fetid if it happens to be the result of the decomposition of some animal substance in the womb.

*Symptoms.*—As the early symptoms very strongly resemble those of pregnancy during the first two or three months, the disorder is not easily distinguished from that interesting condition. The menses are suppressed, the breasts enlarge, the color of the areola darkens, and a thin fluid resembling milk appears in the breasts. In many cases the patient suffers very little, if at all, but sometimes the distress is considerable; there is a sensation of heat with shooting pains in the womb extending to the back, thighs, and vulva. If the uterus becomes much distended, pressure on the rectum and the bladder may irritate these viscera and impede the discharge of their duties. The appetite becomes capricious, and the bowels constipated. These symptoms are observed only when the mouth of the womb is completely closed; thus rendering the escape of the air impossible. When the gas finds egress it escapes from the womb where it originated and accumulates in the vagina from which it escapes periodically producing sensations appreciable to the patient. The latter are the only symptoms usually observed where the mouth of the uterus is open.

*Treatment.*—Sometimes the liberation of the impris-



oned gas is affected by the contractile power of the uterus as in child-birth; or by accident as by blows, falls, bodily motions, straining at stool, sneezing, coughing, vomiting: or the last three may be excited artificially with the hope that the imprisoned gas may be liberated. In the majority of such cases, however, it will be necessary to gently dilate the neck of the womb by introducing the end of the finger therein, by a sponge tent, or by passing into the air-distended organ a large sized elastic male catheter. These measures must be founded on an accurate diagnosis and used with great caution; because if the woman happens to be pregnant an abortion would be certainly induced. After being relieved, she should remain in bed to avoid the risk of exciting inflammation. The mouth of the womb should be kept open to prevent the reaccumulation of the gas. Large vaginal injections of hot water may be thrown into the genital passage twice a day.

If the patient be pale and bloodless, prescription 126 and 127 will do her good.

126 R.	Phosphate of manganese.....	$\frac{1}{2}$ dram.
	Phosphate of iron.....	1 dram.
	Syrup of tolu.....	2 ounces.
	Tincture of calumba.....	2 ounces.

One teaspoonful after meals in water, if preferred. Shake the bottle before measuring the dose.

• 127 R.	Carbonate of manganese.....	$\frac{1}{2}$ dram.
	Carbonate of iron.....	1 dram.
	Simple syrup.....	2 ounces.
	Whiskey.....	1 ounce.
	Water.....	1 ounce.

One teaspoonful after meals in water. Shake the bottle before measuring the dose.



The above preparations should be kept in well-corked bottles.

The patient should afterward take prescription 128, as a uterine tonic until a cure be effected.

128 R. Compound syrup of partridge berry.....6 ounces.  
Fluid extract prickly ash berries..... $\frac{1}{2}$  ounce.

One dessert spoonful after meals.

#### UTERINE MOLES.—HYDATIDS.

Various fleshy masses are occasionally discharged from the womb, being the results of accident, and consist for the most part of dense pieces of coagulated blood, detached fibrous and polypus tumors; others are the remains of blighted conceptions, possessing a very different character and origin. During the first ten or twelve weeks after conception, the ovum draws nourishment directly from the womb; the umbilical cord and placenta not being fully formed. At this early period of embryonic existence the coverings of the developing ovum are very thick and fleshy, although they afterward become greatly expanded and very thin, ultimately forming the well-known bag of waters, that usually does so much good at child-birth by dilating the neck of the womb. If the embryo should die from any cause, it is then so very fragile and soluble, that it very soon dissolves completely in the liquid, in which it floats. Under these conditions, we have a globular mass, consisting of a thick fleshy covering, containing a watery liquid. At the time the embryo dies, the size of the ovum may not be larger than a cherry or a horse-chestnut. In the majority of cases when the embryo perishes, the womb contracts on the now foreign body



and expels it, accompanied by hemorrhage ; constituting an abortion of the usual sort.

But in certain cases, the womb continues to tolerate the mass, which, having a sort of vitality, draws nourishment from the uterine juices, maintains an existence and grows until it is as large as a man's fist, or in rare cases, double that size. Sometimes moles are solid ; a condition that has been accounted for, by supposing that the interior liquid has been absorbed, while the fleshy part continued to encroach on the cavity until it was completely obliterated.

Sometimes the remains of a fetus have been discovered floating in the cavity of a uterine mole. There is usually but one mole present at the same time, but in rare instances two have been observed.

The grape-cluster like masses known as hydatids originate in a somewhat different manner. When the impregnated ovum first reaches the womb after its eight or ten days' journey through the Fallopian tubes from the ovary, its surface is quite smooth, and it receives all its nourishment by absorption from the uterus ; but its absorbing surface requires to be increased in order to satisfy the embryo's rapidly increasing demand for nutrition. This is effected by the ovum throwing out from every part of its surface fleshy processes called villi, that perform for it precisely the functions the roots of plants do for them. If the embryo should die at this point without being expelled from the womb, the ovum may still retain a part of its vitality. Then the villi already mentioned sometimes continue to grow and become filled with fluid until the grape-like mass has attained the weight of several pounds ; in one recorded case as many as fifteen pounds were removed from a



womb at the same time. Individual hydatids vary in size from a pin's head to that of a grape. Their shape is sometimes globular, but is usually oblong. The uterus occasionally contains an immense number at one time.

*Symptoms.*—When there is anything in the womb, the presence of which this organ tolerates, whether it be solid, liquid, or gaseous, the symptoms of early pregnancy are likely to be developed as a necessary consequence. In the disorder under consideration this is just what actually takes place. The menses are suppressed, the abdomen enlarges, the breasts increase in size, and often become tender, the areola darkens, and a thin milky fluid is secreted.

Morning sickness, and occasionally some of the other early symptoms of pregnancy are developed. Pressure on the womb, through the wall of the abdomen, occasionally gives pain, and there is sometimes a watery discharge from the vagina.

There is not usually much disturbance of the general health, nor does the increased size of the uterus cause more inconvenience than is produced by a genuine pregnancy. After an uncertain period the phenomena of an ordinary labor are observed; the womb making an effort to expel its contents. Or if the hydatids have not been long resident in the uterus the phenomena of an ordinary abortion are observed. There are the preliminary discharges of mucus with perhaps a little blood, the labor pains begin, the expansion of the uterine mouth occurs followed by the expulsion of the mole or hydatids, and very often a copious flow of blood. The amount of the hemorrhage is governed by the intimacy of the connection between the growth and the



uterus. If that happens to be very close, a large amount of blood is usually lost; if the hydatids are loosely attached, the hemorrhages are commonly trifling. When the flooding is severe it rarely ceases until the womb is entirely emptied of the hydatids.

*Treatment.*—It is not always easy to distinguish the disorder under consideration from a genuine pregnancy. When a watery fluid escapes from the womb, coming from the rupture of one or more hydatids, the diagnosis becomes clearer, and if a few of the grape-like masses escape, there can be no longer any doubt as to the true nature of the difficulty. As long as there are little or no losses of blood, and the woman's general health is satisfactory, active treatment should not be attempted. If there are repeated losses of blood, these may be checked by laying cold cloths or a rubber bag filled with ice over the lower part of the abdomen and thighs, or by plugging the vagina. Any further treatment should be under the direction of a competent physician.

#### SUB-INVOLUTION OF THE WOMB.

The material composing the virgin womb is almost as dense and hard as cartilage. Even under the microscope it presents very little of the characteristics of muscular tissue; but after conception occurs in the short space of nine months it has grown, by a wonderful development, to be a large and very powerful hollow muscle, containing about twenty-four times as much material as before it became the home of the fecundated ovum. Scarcely less wonderful is the process by which all this now surplus matter is melted down and disposed of in the short space of five or six weeks. The muscular fibres, probably weakened and exhausted by



the result of their violent and sustained action during child-birth, are rendered liable to degenerate, a condition no doubt favored by the largely diminished supply of blood sent to them after their work is done. The muscular walls of the recently delivered womb cannot be absorbed as muscle ; they must first be changed into fatty matter, a process which continues when everything goes on right until the womb returns very nearly to its virgin dimensions. But sometimes this change ceases before the uterus has diminished to its proper size, and it remains permanently as large as it is naturally in the second or third month after delivery. The term subinvolution has been applied to this condition.

*Causes.*—A larger amount of blood flows to the womb when a woman walks about than when she lies down ; this cause alone is adequate to produce a temporary congestion when the uterus is in the delicate condition existing for some weeks after delivery. The congested condition is opposed to the physiological changes necessary to bring the emptied womb back to its virgin size, or very nearly so. Therefore we can readily believe that if a delicate woman gets up too soon after delivery, and remains up while the womb is in the enlarged condition that obtains after labor, the circulation through it becomes impeded to such an extent that its reduction in size is obstructed.

It is a well known fact that when a woman has suffered abortion once she is very apt to miscarry again until sometimes a habit of this sort is formed. In such cases the patient often conceives again in a very short time after the occurrence of the miscarriage before the womb has had time to complete the process of involution by which it returns to its proper dimensions.



Of course as soon as another conception takes place the uterus must again begin to grow. When these important processes are repeatedly crowded together, the physiological operations governing the uterine changes are disturbed, resulting in the naturally enlarged womb remaining in an unnaturally enlarged condition.

Inflammation attacking the womb, its appendages, or, in fact, any part of the pelvic tissues, is very apt to put a stop to involution, causing the still enlarged organ to retain the size it happened to have when the inflammatory attack took place.

*Symptoms.*—A woman who naturally expected complete convalescence after delivery, finds that as the discomforts attending confinement pass away, they are replaced by another series of miseries if involution of the womb does not happen to be completed in the usual way. She becomes conscious of a feeling of discomfort in the uterus, to which she has hitherto happily been a stranger. There is a feeling of weight in the pelvis, an uneasiness of the bladder and bowels, and a weakness, perhaps an actual pain in the lower part of the back. She hopes that all these bad feelings will pass away when sufficient time has been allowed for recovery from the results of child-birth; but is disappointed.

The menses do not return after her child is weaned, if she has been able to nurse it; and if they do make their appearance, the discharge is apt to be profuse and accompanied by pain. Perhaps the menses will be both copious and painful.

Leucorrhœa is an almost invariable symptom, and all things considered, the woman is in notable ill health. The enlarged womb can often be felt by placing the hand on the lower part of the abdo-



men, and the patient can sometimes feel it tumbling about in the pelvis as she turns herself in bed. The disease manifests no natural tendency to spontaneous recovery. There is fortunately little danger to life, but displacements, accompanied by congestions and inflammations, are almost inevitable, with their long list of miseries.

*Treatment.*—Patients who suffer from sub-involution and its consequences, are almost always pale, anæmic and debilitated. Therefore it is well to begin the cure by improving the quality of their blood, and increasing their strength by such remedies as prescriptions 129, 130, 131, or 132.

129 R.	Tincture muriate of iron .....	3 drams.
	Sulphate of quinine.....	24 grains.
	Glycerine.....	2 ounces.
	Spirits of cinnamon.....	2 drams.
	Water to make .....	4 ounces.

One teaspoonful after meals in water. This medicine should be taken through a glass tube.

130 R.	Bitter wine of iron.....	3½ ounces.
	Fowler's solution .....	30 drops.
	Tincture of nux vomica .....	2 drams.

One teaspoonful after meals in a little water.

131 R.	Pyrophosphate of iron .....	40 grains
	Boiling water.....	2 ounces
	Dissolve the iron in the water and add fluid ex- tract cinchona bark.....	½ ounce.
	Glycerine.....	1 ounce.
	Water to make.....	4 ounces.

One teaspoonful in water after meals.



- 132 R. Phosphate of iron.....30 grains.  
 Phosphate of manganese.....30 grains.  
 Dilute phosphoric acid.....  $\frac{1}{2}$  ounce.  
 Elixir Peruvian bark..... 2 ounces.  
 Simple syrup.....1 $\frac{1}{2}$  ounces.

Shake the bottle before measuring the dose, and keep it well corked afterwards.

One teaspoonful after meals.

When tonic medicines are indicated in such cases, the above compounds may always be relied on to secure excellent results.

Every accessible hygienic means should be employed to improve the sufferer's general health. She must cease nursing her child; have as much freedom from care as possible. Change of air and scene often does great good. Abundance of sleep in a well ventilated bed-room is an important consideration. The use of prescription 133, as a discutient remedy to reduce the size of the womb, alternated every two or three weeks with the uterine tonics, prescriptions 134 or 135, will prove very valuable.

- 133 R. Bromide of sodium.....  $\frac{1}{2}$  ounce.  
 Simple syrup.....2 ounces.  
 Water.....5 ounces.

One teaspoonful before meals, and one before retiring for the night. If this remedy produces an eruption on the face, the pimples will disappear when the medicine is discontinued.

- 134 R. Fluid extract false unicorn root.....2 ounces.  
 Fluid extract life root.....2 ounces.

One small teaspoonful in water three times a day, one hour after meals as a uterine tonic.



- 135 R. Fluid extract tagalder.....2 ounces.  
Fluid extract false unicorn root.....2 ounces.  
Fluid extract prickly ash berries..... $\frac{1}{2}$  ounce.

One half to one teaspoonful in water after meals.

If any obstinate case should resist these measures, the sufferer can be cured only by submitting to local treatment by a physician who is an expert in the cure of uterine disorders.

#### SUPER-INVOLUTION OF THE WOMB.

Sometimes the process of involution, by which the enlarged womb is melted down after parturition continues until it is reduced considerably below the virgin size. This is very properly known as super-involution. It is exactly the opposite of sub-involution, the condition described in the last chapter.

*Symptoms.*—The patient is usually first disconcerted by the non-appearances of the menses at the time they are due, after child-birth and nursing. The uterus generally fails in this respect, because in many instances it has become reduced to the condition in which we find it in children before puberty. When this disorder has continued for some time, it begins to produce important constitutional mischief; the woman grows thin, her breasts shrivel, the skin is darkened, withered looking and wrinkled; and the patient, young in years, prematurely assumes the aspect of age. In other words she rapidly acquires the appearance of a middle-aged woman, in whom the menses have naturally ceased. Her health is bad, she is pale, bloodless, and debilitated, has frequent headaches, her digestion is feeble and disordered, her mental powers are notably dulled. Neuralgia and hysteria may complicate the case, and she is quite incapable of again conceiving.



*Treatment.*—The measures recommended for building up the general health in the condition of sub-involution already described, are quite as applicable here. After the patient's health has been improved by these means, the menses will sometimes appear spontaneously, because the woman may now be getting into a condition in which Nature is enabled to mature an ovum in the ovaries every month, and to afford the loss of blood occurring at menstruation. If so, the same treatment should be continued until a complete cure be attained. But if the menstrual discharge does not make its appearance when the patient's general health has been considerably improved, then a gentle current of electricity should be passed through the womb once or twice a week.

When the monthly periods are believed to be due, prescription 136 will assist very materially in cases of sub-involution to stimulate the generative organs to the normal discharge of their functions.

136 R. Powdered socotrine aloes.....1 dram.

Divide into 15 powders; mix one powder with half a teacupful of warm milk, and inject the mixture into the rectum; repeating the enema every hour until painful tenesmus be produced, or the menstrual flow makes its appearance, when the remedy should be discontinued. The following uterine tonics should be taken for a month or two after the uterine functions are restored to prevent the subsequent failure of the menses.

137 R. Fluid extract life root .....2 ounces.

Fluid extract unicorn root .....2 ounces.

Glycerine.....1 ounce.

Half to one teaspoonful in water, three times a day, one hour after meals.



- 138 R. Fluid extract partridge berry.....3 ounces.  
 Fluid extract skullcap.....1 ounce.  
 Fluid extract prickly ash berries..... $\frac{1}{2}$  ounce.  
 Glycerine..... $1\frac{1}{2}$  ounce.

Half to one teaspoonful in water, three times a day,  
 one hour after meals.

#### IRRITATION OF THE OVARIES.

The ovaries are the essential organs of generation in the female ; by them the egg is elaborated which, when fecundated, forms the starting point in the development of a new being. They are almond-shaped bodies situated one at each side of the uterus between the folds of the broad ligaments ; each ovary is about one inch and a half in length, and weighs about eighty grains. A painful condition of these important organs, apart from inflammatory disease, is described as ovarian irritation. It is a very frequent disorder, being observed in women of all ages ; but those of a delicate, susceptible organization are specially liable to it.

*Symptoms.*—The chief symptom is pain of greater or lesser severity in one or both ovaries, most frequently in the left. The pain is often a ceaseless, dull ache, or it may be manifested in acute paroxysms which are sometimes so much aggravated by exertion as to oblige the sufferer to retain the recumbent position. The groin and the part overlying the ovaries are very often excessively tender, and pressure gives rise to pain of a peculiarly sickening character. When the pain is very great, irritation of the bladder, with a frequent desire to urinate, is very often caused. Hysteria is commonly associated with the disorder under consideration. In some cases a hysterical attack may be aggravated or excited by simply pressing on the irritated ovary.



All the other generative organs may be healthy ; no heat nor swelling to be detected anywhere. When uncomplicated the disorder rarely produces notable constitutional disturbance ; there are no evidences of fever, the pulse is not frequent, nor is the bodily temperature raised. Sometimes it is accompanied by menstrual irregularities, but may be and often is quite independent of any disorder of that function. It is worthy of note that the tenderness of the irritated ovary is often much greater than would be caused by genuine ovarian inflammation. The patient will complain as bitterly of the slightest touch as of firm pressure, particularly if her attention be diverted when the latter is being applied.

*Treatment.*—If walking increases the painful irritation, the patient should be kept as quiet as possible. Great and immediate relief may be secured, and much done to effect a permanent cure by hot hip-baths given once or twice a day. When the pain is severe prescription 139 should be taken in tablespoonful doses until relief be obtained. This remedy also exercises a potent influence in permanently overcoming ovarian irritation. For this purpose it should be taken between the painful seizures in teaspoonful doses.

139 R.	Bromide of potash.....	$\frac{1}{2}$ ounce.
	Bromide of sodium.....	$\frac{1}{2}$ ounce.
	Simple syrup.....	2 ounces.
	Water.....	3 ounces.

Dissolve the medicines in the water, and add the syrup. To be used as directed above.

If the baths and the foregoing preparation fail to afford adequate relief in the very severest cases, the



following suppository will rarely or never disappoint expectations.

140 R. Sulphate of morphia.....4 grains.  
Solid extract belladonna.....2 grains.  
Powdered licorice root.....1 dram.  
Glycerole of starch a sufficient quantity.

Mix. Divide into twelve suppositories. To relieve pain place one in the rectum.

#### ACUTE INFLAMMATION OF THE OVARIES.

This disease is seldom met with except as a complication of pregnancy, parturition, or miscarriage. In such circumstances the ovaries are affected secondarily by disease extending to them from some inflamed neighboring structure. The ovaries are situated between the folds of the broad ligaments, and the membrane by which they are covered is continuous with the peritoneum forming these ligaments. Therefore when any inflammatory action invades the latter structure, the disease is exceedingly apt to extend to the ovaries. The same disaster is very likely to occur whenever the cellular tissue of the parts becomes inflamed. Sudden suppression of menstruation by cold is also a fruitful cause of ovarian inflammation as well as of other grave disorders of the womb and its appendages.

*Symptoms.*—When the ovaries alone are inflamed, the adjacent tissue being quite healthy, the peculiar sickening, unendurable pain accompanying this disease is located in the point occupied by the diseased gland; and the diagnosis is not very difficult. But when it occurs as a part of a more extensive inflammation of the pelvic cellular tissue or peritoneum, it is often very hard to determine whether the ovaries are affected or



not, although under these circumstances they can scarcely escape. The patient suffers from a deep seated pain in the pelvis; it is not constant if she keeps quiet, but is usually much worse if she moves about. As long as the inflammation is confined to the ovary the constitutional symptoms are not severe; but if a considerable part of the adjacent peritoneum be involved, fever sets in, the pulse becomes frequent, small, and wiry, the skin hot and dry, and the countenance anxious. This complication is very apt to occur in women who have been recently delivered. If the inflammation extends toward the bladder the patients will complain of a desire to pass water frequently, a few drops only being voided at a time with severe scalding and bearing down. The bladder itself may feel as if it were swelled, and is often very tender on pressure. If the disease spreads to the tissues about the rectum the patient suffers from a painful feeling of fullness in the lower bowel, and a frequent or perhaps constant desire to go to stool without obtaining relief by doing so.

*Treatment.*—At the very beginning of the disease hot hip-baths of five to ten minutes duration are of very decided benefit; they act by withdrawing the blood from the inflamed ovary to the skin. The application of hot water after this manner is, however, much less useful when the disease is well advanced. At this stage the injury the patient sustains by getting in and out of the bath decidedly detracts from its value. She should not be allowed to get up for any purpose whatever.

Vaginal injections, consisting of two or three quarts of hot water, may be given to the sufferer while she is lying on her back in bed with very great benefit; these may be repeated as often as may be necessary. If addi-



tional means be required to relieve the acute pain, the following prescription will prove effectual:

141 R. McMunn's elixir of opium.....1 ounce.  
Tincture of belladonna.....1 dram.

Thirty to forty drops in a tablespoonful of tepid water may be injected into the rectum.

If the weight of hot flannel cloths can be borne comfortably these should be laid on the abdomen over the inflamed ovary, and changed as often as they become cool. Their efficacy may be increased by sprinkling them freely with spirits of turpentine.

These measures, diligently employed, are often sufficient to check the disease promptly, but if not, matter will probably form in and about the diseased ovary. Under these circumstances a skillful surgeon must be called who will conduct the subsequent treatment.

#### CHRONIC INFLAMMATION OF THE OVARIES.—OVARITIS.

The chronic variety of ovarian inflammation is usually the result of an acute attack. Because of the intimate sympathy existing between the uterus and the ovaries, disease of the former very often excites sympathetic pains of a neuralgic character in the latter organs, although these may be quite healthy. Under such circumstances the ovarian distress does not consist of severe well defined pain, which is observed when the ovaries themselves are the seat of inflammatory action.

Sometimes the menses are suppressed; but if not, the painful symptoms are always aggravated immediately before and during the menstrual period. The constitutional symptoms attending the acute are gener-



ally absent in the chronic variety of ovaritis. By pressing the sides of the vagina with the fingers the enlarged and tender ovary can usually be felt.

The chronic variety of ovarian inflammation may, like the acute, terminate in the first stage, or may undergo resolution, without going on to the formation of matter. This favorable change will be marked by the gradual improvement of all the symptoms, both general and local: by the return of the menses, if these have been suppressed, and by the appearance of the natural discharges, occurring after child-birth, if the patient has been delivered recently. But, on the other hand, instead of taking this favorable turn, the disorder may spread from the ovary to the broad ligaments and the pelvic peritoneum, resulting in a disease of a serious character.

*Treatment.*—The use of hip-baths, vaginal injections, and fomentations, in the manner recommended for acute ovarian inflammation, will prove equally serviceable in the chronic form of the disease. The bowels must be kept free by a laxative diet, or by the use of prescription 142.

142. R. Powdered senna leaves.....6 drams.  
 Powdered licorice root.....6 drams.  
 Powdered fennel seed.....3 drams.  
 Sulphur.....3 drams.  
 Powdered white sugar.....3 ounces.

Mix the powders perfectly, and take one-half to one teaspoonful in water before retiring for the night.

An irritating drawing plaster should be prepared after prescription 143, and applied to the skin over the diseased ovary, and kept on until matter flows freely



from the part or a cure be effected. When this plaster is kept on until a sore is formed, the matter should be wiped away with dry cloths : it should never under any circumstances be washed away with water.

143. R. Burgundy pitch..... 6 drams.  
 White turpentine.....  $\frac{1}{2}$  ounce.  
 Yellow pine tar.....  $1\frac{1}{2}$  ounce.  
 Mandrake root }  
 Bloodroot..... } ..... of each 135 grains.  
 Pokeroot ..... }

All in fine powder. Melt the turpentine and the tar together, remove from the fire, stir in the powders. Spread the plaster on soft leather and apply it to the part where the irritation is to be excited. Examine the skin beneath the plaster daily to observe the effect.

The formation of matter in the inflamed ovary will be signalized by chills, softness of the pulse, cessation of the preceding painful throbbing, and an increased sense of weight. In the latter case a skillful surgeon must be employed, by whom the subsequent treatment will be directed.

#### MENSTRUATION.

The earliest written record concerning this function is found in the thirty-first chapter of the book of Genesis, in which it is stated that when Laban was searching Jacob's effects for his stolen gods, his daughter Rachel excused herself from rising up to allow her father to search the cushions on which she sat, where the missing deities were, by saying, "Let it not displease my lord that I cannot rise up before thee, for the custom of women is upon me."

Menstruation cannot be regarded as an isolated occur-



rence, but is rather one of a series of important phenomena which occur during the ripening in and discharge of an egg from the ovary.

Its first appearance is associated with other significant signs of puberty. The pelvic bones now become rapidly developed, causing a change in the figure and the gait; the breasts enlarge, the areola acquires a more rosy hue, the nipple becomes more prominent, and the whole person more rounded by a deposit of fat. These physical changes are associated with the development of new mental and moral characteristics. The young woman's demeanor is changed, she shows by many unmistakable signs she has passed from girlhood to womanhood. She is no longer a child, sportive, playful and careless; but a woman dignified, reserved, and self-possessed.

The first occurrence of menstruation is often accompanied by a slight ephemeral fever. The girl complains of lassitude, a feeling of fullness and perhaps weight in the pelvis. Sometimes these slight disorders are attended by nervous affections—the dance of Saint Vitus and hysteria may occur in a mild form. After a few days a mucous discharge of variable quantity appears, which becomes tinged with blood, afterwards it is found to be almost pure blood, to be again replaced by a tinted and finally by a colorless discharge resembling that which first appeared. The symptoms by which the menses were ushered in disappear with the discharge; which may have lasted from three to six days, and the young woman is restored to her usual condition: but with an intangible change in manner and bearing, which evinces the importance of the internal change just completed. In many cases, however, the discharge



occurs for the first time during sleep, without being accompanied by any disagreeable symptoms whatever.

Menstruation is not usually established at the first effort. In many cases the symptoms accompanying the menses are observed without the occurrence of any discharge: probably indicating abortive attempts on the part of Nature to ripen an ovum in the ovary.

Climate appears to have a decided influence on the time at which the menses first appear. The average age when the function is established in women who inhabit hot countries is nearly three years earlier than in those who live in very cold climates. The influence of climate operates very slowly in hastening the discharge in the descendants of Europeans residing in very warm climates. This sign of puberty occurs at about the same time in them even to the third generation as it does in those who have always inhabited the temperate climate of Europe.

The period at which menstruation may be normally established differs very widely in different individuals. It may first appear in European women at any time between the ages of twelve and twenty without any more disturbance of the system than takes place when the period is nearer the average; but if beyond these limits it is to be considered very exceptional, yet even then the health may not be unfavorably affected in any way.

Education and mode of life modify this function to some extent. The sexual organs arrive at their full development more slowly and manifest functional activity later in girls who live on a simple, unstimulating diet, than in those who habitually drink tea and coffee, and consume rich, stimulating food freely. Reading the prurient literature of the day also excites to premature



development the sexual organs of young girls by filling the mind with the scenes and situations depicted in the highly wrought love stories for sale at every news-stand.

Temperament and condition of health exercise notable influence on this function. Girls of a nervous, active organization in robust health will almost always menstruate earlier than those of a sluggish, phlegmatic constitution; particularly if the latter be delicate or scrofulous. In the latter cases Nature kindly delays the function until the developing feminine constitution be fully equal to the vital expense involved in its discharge.

When it is once fully established the menses recur with periodical regularity during the whole child-bearing period. The only conditions that normally arrest the function are pregnancy and wet-nursing. During these times the vital energies of the ovaries are diverted into other channels. If the menses fail to appear under other circumstances their non-appearance is usually due to some constitutional disorder, or if the difficulty be local at first the general health sooner or later becomes involved.

The discharge may normally continue from one to eight days; the average time is, however, about five days, counting from the time it first becomes sanguineous until the color disappears. The menstrual discharge and its interval together occupy a period of four weeks or twenty-eight days; but although this is the rule, it has some notable exceptions. A few days, more or less, is of frequent occurrence. But it is not very rare to observe women who are unwell once every two, three, or six weeks regularly, without any more disturbance of the health than is suffered by those who invariably accomplish twenty-eight days.



There are obvious difficulties in ascertaining even approximately the amount of fluid discharged at one period. Some eminent physiologists put the figures down at two or three fluid ounces, while others say four to six fluid ounces. The latter estimate is probably excessive, and in the great majority of cases will produce deleterious effects on the constitution, such as paleness, nervousness, muscular debility and headaches.

The old physiologists entertained curious and fantastic ideas as to the causes of menstruation. Some believed it to be due to lunar influence, because the usual menstrual period was the same as that required by the moon to pass through its phases; others taught that the female constitution manufactured more blood than was needed for the vital purposes when the woman was not pregnant, and that every month the system had to be relieved of it; others contended it was caused by local congestion, which was undoubtedly a partial truth. But women not only menstruate at every phase of the moon, but at every day and hour of the year; and there is nothing more common than to see women who seem to have no blood to spare, yet their turns appear every month with unvarying regularity. Nature, with unerring wisdom, develops the physical organs and functions as they are needed. In early embryonic development the formation of the nervous system is first laid in the primitive groove; subsequently one organ is developed after another as it is needed; thus, at successive periods, the blood-vessels are formed and the vital current begins to flow through them; the heart commences its pulsations; still later the lungs and the stomach enter on the discharge of their duties; and when in the course of physical growth the female



sexual organs are matured, they begin their functional activity, of which menstruation is the most notable external manifestation.

The immediate cause of the menses is, however, due to ovarian action. When an ovum ripens in one of the ovaries, Nature, so to speak, expects it to be fecundated, and she accordingly prepares the uterus for the accommodation of the ovum. At this time blood flows to the womb in greatly increased quantities; the mucous membrane lining its cavity becomes softened and thickened. But when Nature is disappointed by the failure of impregnation, the blood congesting the womb and its appendages cannot all return back again into the general circulation; therefore, a part flows externally, constituting the menstrual discharge, as previously intimated.

The ancients believed this fluid possessed poisonous properties; they were of the opinion that its exhalations would turn milk sour, wine bitter, and destroy vegetation. Although these ideas were greatly exaggerated, they possibly contained a grain of truth. There is no doubt but that when the menses are suppressed from any abnormal cause, nervous disturbances are almost infallibly manifested, accompanied by a notably diminished quantity of urine. It is quite possible these disorders may be due to the deleterious influence of poisonous elements on the nervous centers that ought to be eliminated in the menstrual fluid. These views are corroborated by the beneficial effects of remedies which establish the urinary secretion and stimulate the skin.

One of the most notable changes undergone by blood after it has been drawn from the vessels is coagulation.



As the normal menstrual fluid does not coagulate, it was claimed to be something else ; but if the fluid be caught as it drops from the mouth of the womb, it coagulates like the vital fluid drawn from the veins. But if it be examined after having trickled down through the vagina and appeared externally, it does not then coagulate, because the element on which coagulation depends—the fibrin—is held in solution by being mixed with the acid mucus of the genital canal.

The menstrual discharge really consists of blood mixed with mucus and epithelium from the uterine and vaginal mucous membranes.

As before intimated, the uterine mucous membrane becomes thickened at the approach of the menstrual period ; so much so that it is thrown into convolutions which project from the internal uterine wall, and almost fill its cavity. The superficial capillary blood-vessels then rupture, and the hemorrhage begins, which constitutes the discharge.

The menstrual or child-bearing period of a woman's life may be said to begin about the fifteenth and cease about the forty-fifth year. Its duration is therefore about thirty years. In some cases it ceases before forty ; in many cases the menopause occurs much later. We know of an old lady whose menses appeared with perfect regularity when she was past seventy years of age.

If we examine the ovaries of young children, thousands of ova may be discovered in an ovary. As puberty approaches, the vast majority of these are absorbed while the remainder undergo development. There is reason to believe that the elderly woman ceases to ovulate, because all the ova capable of development have



been ripened and extruded. When ovulation ceases menstruation ceases, because the latter depends on the former.

• PROFUSE MENSTRUATION.

By profuse menstruation we understand simply an unnaturally increased quantity of the menstrual discharge, the quality being healthy. No rigid rule can be laid down as to what should constitute a proper quantity in all cases, because this varies considerably in different women within perfectly healthy limits. Thus some are unwell but two or three days, and the aggregate loss is about as many ounces; others flow for a week or more, and lose during that time from half a pint to almost double that quantity.

SHOWING WHEN THE MENSES ARE ABNORMALLY PROFUSE.

The blood is an alkaline fluid, and owes its power of coagulation to the presence of fibrin. The secretions of the vagina, on the other hand, are acid, due to the presence of the same acid that exists in vinegar—acetic acid. If the menstrual fluid be caught as it issues drop by drop from the womb, it then has the power to coagulate, showing that it is really blood, very little changed, except the color is darker; but if it slowly trickles in suitable quantity into the vagina, its fibrin is dissolved by the acid mucus secreted by the mucous membrane of that passage. Therefore, clots are never formed, neither internally nor externally, by the perfectly normal menstrual discharge. But if the blood escaping from the womb during the monthly illness does form clots, this fact furnishes strong reasons for believing the quantity to be excessive. The larger the



quantity of coagula, the farther the case has departed from the healthy standard. Menstruation is to be regarded as being profuse if the amount lost at each period be sufficient to induce the symptoms attending an undue loss of blood.

*Symptoms.*—When a woman loses too much blood by having copious discharges during the regular periods or through their too frequent recurrence, the symptoms are very much the same as if she had lost blood from any other cause or part of the body. She becomes pale, her complexion waxy; she suffers from exhaustion and debility; moderate exertion causes great fatigue; her temples throb; her head aches severely; her ears ring, and she suffers from vertigo; her back and limbs are very painful. If the excessive flow continues month after month, these symptoms are aggravated; her complexion becomes sallow, the lips bloodless, eyes heavy, digestion feeble, the bowels disordered; diarrhea alternates with constipation; the sufferer becomes nervous, is dispirited, and weeps readily. There is no apparent disease of the womb; it may neither be inflamed, ulcerated, nor displaced, but its color is usually very pale, as might be expected from the copious losses of blood.

*Causes.*—A spongy condition of the mucous membrane lining the womb is often produced by one or more miscarriages, that strongly predispose to excessive losses of blood at the periods. Heavy skirts and tight clothing, by preventing the natural motions of the uterus described at the beginning of this work, cause habitual congestion by obstructing the outflow of blood from the womb, and predispose to the disorder under consideration. Nursing too long also very strongly favors profuse menstruation as soon as the latter function is re-estab-



lished after parturition. It is also exceedingly common among young women, with whom it seems to be constitutional, although none of the causes cited have been in operation, yet they may have suffered from profuse menstruation ever since they changed.

*Treatment.*—As soon as the discharge makes its appearance the patient should be kept quiet in bed. In severe cases, conversation should not be permitted. Warm drinks of every kind must be avoided. She should be covered lightly while in bed, and the apartment kept cool. Cold lemonade without sugar, or very slightly sweetened, may be given freely. Cloths wrung out of cold water should be laid over the abdomen, vulva, and thighs. The feet and person should be kept comfortably warm by artificial heat; this is very important, because every means must be employed to draw away the blood from the congested womb. Prescriptions 144, 145, 146, 147, 148, or 149, may be given internally with excellent effect. One of the following preparations will be sure to succeed in every uncomplicated case.

- 144 R. Oil of cinnamon bark..... 1 dram.  
 Oil of Canada fleabane..... $\frac{1}{2}$  dram.  
 Whiskey..... 2 ounces.

Mix the essential oils with the whiskey by shaking. Half a teaspoonful in water every two or three hours.

- 145 R. Aromatic sulphuric acid..... 6 drams.  
 Oil of cinnamon bark ..... 1 dram.

Twelve to fifteen drops in water every two or three hours.



- 146 R. Citric acid.....24 grains.  
 Simple syrup ..... 1 ounce.  
 Water.....15 ounces.

This forms a very excellent acid drink during profuse menstruation, almost or quite equal to the best lemonade.

- 147 R. Tartaric acid.....24 grains.  
 Syrup of orange peel..... 1 ounce.  
 Water.....15 ounces.

A very agreeable acid drink.

- 148 R. Sulphate of alumina.....32 grains.  
 Tincture of cinnamon..... 3 drams.  
 Syrup of orange peel. ....  $\frac{1}{2}$  ounce  
 Water..... 4 ounces.

Dissolve the first ingredient in the water and add the other ingredients. Take one tablespoonful every hour until the flow be controlled.

- 149 R. Gallic acid.....20 grains.  
 Aromatic sulphuric acid.....20 drops.  
 Tincture of cinnamon..... 3 drams.  
 Water..... 2 ounces.

Mix the ingredients by shaking the bottle. Take one tablespoonful every three hours until the discharge be controlled.

Sometimes a hot brick, or bottle of water placed against the lower part of the back, promptly checks profuse menstruation. In all ordinary cases when the hemorrhage is uncomplicated, these measures will be rewarded with success. But sometimes a uterine hemorrhage occurs strongly resembling profuse menstruation. In the latter cases, the blood may proceed from a small polypus concealed in the uterus; small wart-like



growths in the same situation, from ulceration of the neck of the womb, fibrous tumors, cancer, or perhaps the loss of blood may be due to a bit of placenta remaining in the womb after child-birth, or miscarriage.

The symptoms and treatment of all these difficulties are discussed in this work under their appropriate heads. Very mild cases of profuse menstruation may be controlled by causing the patient to keep quiet on a lounge while the flow is most copious, and by giving her a few doses of some of the remedies previously recommended.

In all cases, the patient should use only a plain unstimulating diet, avoiding all alcoholic beverages. Spices and hot stimulating sauces are pernicious. The bowels should be kept open by the daily use of oatmeal, graham bread, cracked wheat, and fruits. Salt water baths with friction are very invigorating. By the use of these measures a cure may be readily attained, provided the disorder be functional only, and does not depend on any organic cause. In the latter case, surgical measures alone are likely to be effectual.

#### SUPPRESSION OF THE MENSES.—AMENORRHEA.

Before puberty, during pregnancy, wet nursing and after the menopause, the menses are naturally absent. We intend to discuss here only those diseased conditions, in which the menses are suppressed when they ought to appear regularly. There is perhaps no disorder of the genital functions, so common among civilized women as this. When the sexual organs are healthy, an ovum is usually developed in the ovaries every twenty-eight days. Nature expects, so to speak, this egg shall be fecundated, and she accordingly pre-



pares the womb for its reception, by sending to it a very large supply of blood. If the ovum be not fertilized, it passes away in due time, as effete matter, and there is no necessity that any uterine enlargement should occur: therefore the blood intended for that purpose pours forth from the mucous membrane, lining the womb, mainly, because it cannot be returned back again into the general circulation. Menstruation is therefore an external evidence that ovulation is going on in the ovaries.

Amenorrhea is very properly divided into two sorts. *Emansio-mensium*, or failure of the menses to appear when the time for their establishment has arrived; and *suppressio-mensium*, when after having appeared for a longer or a shorter time, the discharge has ceased prematurely.

#### CONDITIONS THAT PREVENT THE MENSES BEING ESTABLISHED.

Children are frequently born with deformities of the external organs: of these club-feet, hare-lips and webbed fingers and toes are familiar examples. Deformities of the internal organs exist perhaps quite as frequently; of the latter there are none so often malformed, as the sexual organs. The womb is very rarely entirely wanting; there is but one case on record where no traces of it could be found, even after the parts were removed post-mortem. But it often exists in so rudimentary a state at birth, that it seems to be incompetent to undergo suitable development at puberty. In the same way the ovaries, the essential female organs of generation, may be entirely wanting, or only rudimentary. Under these circumstances it is physically



impossible the menses should appear even when the young woman has attained a suitable age.

#### EXTERNAL SIGNS OF INTERNAL SEXUAL MALFORMATION.

Boys and girls are externally very much alike, until the development of the sexual organs at puberty rapidly produces the special external characteristics of the whole person, peculiar to the two sexes. The continued integrity of the developed sexual organs is essential to the preservation of these distinctive features: this fact is proved by the effeminate changes that take place in eunuchs. On the other hand it is well known that women who have been deprived of their ovaries by surgical operations, or in whom they have been destroyed by disease, very quickly acquire male peculiarities: their breasts shrink, their muscles develop, the voice becomes harsher, and there is a tendency to the growth of a miniature beard.

If these features should be observed in any young woman, who does not menstruate after having arrived at a proper age, it is highly probable her internal sexual organs are rudimentary in a greater or lesser degree.

*Treatment for this kind of amenorrhea.*—Of course, the development of the rudimentary sexual organs up to the point where they shall be able to discharge their functions, is the object to be sought. If the ovaries be congenitally defective, experience has shown that little can be effectively done in stimulating the growth of these highly organized and essential structures. But the development of the rudimentary uterus is often much more easily attained. The most simple means should first be tried, such as large vaginal injections of water, at a temperature of one hundred to one hundred



and five degrees. Several months must elapse before tangible results can be secured even in the most favorable cases. A gentle induced current of electricity is also a very valuable agent. The positive pole may be applied to the patient's back, and the negative, properly protected, placed against the uterine neck. Electricity develops the rudimentary muscular fibres, causes contraction in them and increases the flow of blood to the uterus, to provide material for its growth. Prescription 150, taken as directed, will assist materially in bringing about the desired result.

150 R. Fluid extract cotton root bark .....4 ounces.

One teaspoonful in water, three times a day, one hour before meals.

In some cases, these measures will be quite successful, in others, local treatment of a more energetic character must be used. In seeking to develop a rudimentary uterus, that resists the foregoing remedies, advantage may be taken of the important physiological law, that when any continuous, but gentle irritation is applied to the inside of the uterus either by a fecundated ovum or any foreign body, such as a polypus, or other tumor, the uterus undergoes development. To accomplish this indication by artificial means, one of Sir James Simpson's intra-uterine galvanic pessaries may be cautiously introduced into the inside of the womb, and worn continuously by the patient, until the menstrual discharge be established, or the instrument causes so much irritation as to require its removal. Even when the patient can tolerate the instrument quite comfortably, it should be removed every two weeks, thoroughly cleansed, and replaced. Instruments of this sort should never be



placed inside the uterus, if there be the slightest inflammation about it. If the patient be weak, pale and anæmic, every means should be employed to improve the general condition, by the use of tonic medicines and healthful living. The following are excellent prescriptions for enriching the blood, and improving the appetite :

- 151 R. Citrate of iron and quinine.....1 dram.  
 Fluid extract calisaya bark.....3 drams.  
 Whiskey ... .. $\frac{1}{2}$  ounce.  
 Glycerine .....2 ounces.  
 Water enough to make .....6 ounces.

One dessert-spoonful after meals.

- 152 R. Phosphate of iron.....2 drams.  
 Curaçoa ..... $\frac{1}{2}$  ounce.  
 Glycerine .....1 ounce.  
 Water.....3 $\frac{1}{2}$  ounces.

One teaspoonful after meals.

- 153 R. Bitter wine of iron.....3 ounces.  
 Glycerine.....1 ounce.

Shake the bottle. One teaspoonful after meals.

There are very few cases in which excellent results cannot be attained by the foregoing treatment.

#### SUPPRESSION OF THE MENSES FROM MALFORMATION.

In many virgins, the external orifice of the vagina is partly closed by a delicate veil, composed of two thin folds of mucous membrane: called the hymen; it is very often destroyed in early life by falls, coughing, or sneezing. Even when it is intact up to puberty there is almost always an opening for the discharge of the menstrual fluid. Sometimes, however, the hymen is exceedingly tough, and totally destitute of any opening,



so that when the womb pours forth the menstrual discharge, the fluid accumulates in the uterus and vagina, occasionally distending them to the utmost; but, of course, it fails to appear externally, there being no aperture in these cases for it to escape. In these circumstances, a surgeon must be employed to remove the tough resisting hymen, and evacuate the contents of the genital cavities.

In other rare cases, the internal generative organs are quite perfect, except the genital canal, as far as can be determined by careful examination, with all the external appearances of developed womanhood; yet the vaginal canal is completely wanting, being replaced by a fibrous cord. The most skillful surgeons cannot offer any remedy for such a condition, nor for any other serious congenital malformation.

#### SUPPRESSION OF THE MENSES FROM CONSTITUTIONAL DISORDERS.

Occasionally very healthy looking women suffer from the disorder under consideration. Besides the suppression of the menses, no symptoms may be present, except, perhaps a feeling of fullness about the head which is usually increased by stooping over.

The physical appearance of such patients may even be improved by the undue accumulation of blood, resulting from their disorder.

They may be distressed, because being married women, they desire to become mothers, but are barren. All we need to do, in such cases, is to cause a determination of blood to the uterus, about the time the menses are due, to secure excellent and prompt results. Prescription 154 is adapted to bring about this desirable result.



- 154 R. Solution of the subsulphate of iron.....1 dram.  
 Water.....4 ounces.

Inject one teaspoonful into the rectum every hour, until a painful bearing down feeling be caused.

If the feeling about the patient's head be distressing, particularly if it amounts to headache, prompt relief may be obtained by one of the following prescriptions:

- 155 R. Sulphate of soda.....1 ounce.  
 Ginger tea.....4 ounces.

Dissolve the medicine in the tea, and take one-half at one dose; if no cathartic effect be obtained in two or three hours, the other half may be taken with advantage.

- 156 R. Fluid extract buckthorn bark.....4 ounces.

One teaspoonful three times a day. The dose may be increased to one tablespoonful, three times a day, if necessary.

- 157 R. Croton oil.....2 drops.  
 Simple syrup.....2 ounces.  
 Water.....2 ounces.

Mix the ingredients by shaking the bottle. One tablespoonful every half hour, until a cathartic effect be obtained. This remedy is a very active cathartic.

It is a remarkable fact, that corpulent women very rarely menstruate healthfully.

#### UTERINE LEUCORRHŒA REPLACING THE MENSES.

In this class of cases Nature evidently makes a vigorous effort to perform her functions, but succeeds only in pouring forth a discharge quite free from any mixture of blood. In such cases all the general symptoms attending the menstrual discharge are experienced every month; weight at the lower part of the abdomen, headache, lassitude, weariness, and backache.



Sometimes the whitish discharge is accompanied by pain, and in some cases it is quite fetid.

This condition is most frequently observed in young girls at the beginning of their menstrual life. It may give place, after a few months, to a perfectly natural menstrual discharge, but it often continues until relieved by suitable treatment. This sort of leucorrhœa must be distinguished from a discharge depending on an inflamed condition of the mucous membrane lining the womb. In the former condition the discharge is observed only at the time the menses should appear, and is then quite copious. But in the latter disorder it continues throughout the month, accompanied by other distressing symptoms of chronic inflammatory uterine disorder.

*Treatment.*—As this form of menstrual suppression is due mainly to general constitutional disorder, our treatment must be adapted to improve the quality of the blood, and through that the general health. The food of such patients should be very nutritious but digestible. Pure, rich milk is a very valuable article of diet in this as in most cases of physical prostration. If the stomach be weak so that three full meals cannot be digested each day, food may be given in small quantities every hour or two. Wine or ale may be allowed in very moderate doses with food, but at no other times. In all cases of debility, where the assimilative powers are mainly at fault, an occasional laxative will be valuable. The latter remedies act by clearing out the mucus by which the intestines of such subjects are coated. The rapid and complete absorption of whatever nutritive material is presented to the absorbing membranes is thus greatly facilitated. Prescription 158 acts gently and effectively.



- 158 R. Senna leaves.....1½ ounce.  
 Licorice root.....1½ ounce.  
 Coriander seed.....¾ ounce.  
 Sulphur.....¾ ounce.  
 Sugar.....6 ounces.

All in fine powder. Mix the powders. Take one teaspoonful in water before retiring for the night.

If the patient's digestive powers need invigorating, very great improvement may be obtained by the use of four ounces of prescription 159 :

159. R. Acetate of strychnia..... 1 grain  
 Sulphate of quinine.....20 grains.  
 Dilute sulphuric acid.....20 drops.  
 Water enough to make..... 4 ounces.

One small teaspoonful in water after meals.

If she be pale and bloodless, prescription 160 will supply some essential ingredients for the enrichment of the vital fluid :

- 160 R. Pyrophosphate of iron.....2 drams.  
 Boiling water.....2 ounces.  
 Dissolve the iron in the water, and add  
 Fluid extract gentian.....2 drams.  
 Curaçoa .....3 ounces.

One teaspoonful in water after meals.

At the time the menses are expected, hot mustard foot baths, with the use of prescription 161, will speedily prove successful if the preceding treatment has been faithfully carried out :

- 161 R. Aromatic spirits of ammonia.....1 dram.  
 Warmed sweet milk.....1 pint.

Mix, and use as a vaginal injection.



## ACUTE SUPPRESSION OF THE MENSES.

This disorder usually occurs by the sudden stoppage of the discharge while it is proceeding naturally. It takes place very frequently from exposure to cold, from shame, fear, or mental distress due to any cause.

*Symptoms.*—In some cases the symptoms attending acute suppression are quite moderate, in others they are very severe. A sharp fever, with inflammation of the uterus with or without pelvic peritonitis or extravasation of blood in the cellular tissue; repeated faintings or hysterical attacks are occasionally observed.

*Treatment.*—As all the trouble in these cases arises because the menstrual flow has been suddenly suppressed, the symptoms usually begin to abate as soon as the discharge is re-established. Prompt measures should therefore be used for this purpose. A warm hip bath with the feet at the same time immersed in hot water and mustard is a very excellent remedy in such cases. After the bath the patient should be put in bed and have hot moist flannels placed over the lower part of the abdomen and vulva. A hot bottle may be laid between the thighs, and prescription 162 given internally as directed until free perspiration has been excited.

162 R. Powdered pleurisy root..... $\frac{1}{2}$  ounce.  
 Powdered boneset..... $\frac{1}{2}$  ounce.  
 Powdered bloodroot.....1 dram.  
 Nitrate of potash.....2 drams.

Mix the ingredients thoroughly. Divide into 24 powders. Give one powder in water every two or three hours until the patient perspires freely.

If these measures should fail in recalling the discharge and fever be developed, it is very likely acute



inflammation of the mucous lining of the uterus has taken place. If so the treatment must be directed to the cure of the latter disorder.

The patient should be kept quiet in bed, the warm fomentations over the lower part of the abdomen should be continued. If there be severe pelvic pains the following remedy will always afford relief:

163 R. McMunn's elixir of opium.....1 ounce.  
Tincture of belladonna.....1 dram.

Twenty-five to thirty drops in a tablespoonful of warm water to be injected into the rectum. If relief be not obtained the dose may be repeated in one hour.

After the most acute symptoms have passed off, a vaginal injection of two or three quarts of hot water will do much to remove the local inflammation inside the uterus.

Even if the uterine inflammation be cured it is not likely the suppressed menses will make their appearance before the next regular period. Nothing can be effectively done to bring on the menses until they are almost due. In order to be prepared to take advantage of the natural tendency to the occurrence of the menstrual flow at that time, every means should be employed during the whole month to maintain the patient's health; her feet and person must be kept warm and the bowels easy. Warm hip and foot baths should be used every other night before retiring. The diet must be generous and digestible. If the menses return healthfully, the patient's recovery may be considered complete.

But if no proper discharge appears and no local inflammation exists, then the following remedies may be successfully used until a cure be obtained:



- 164 R. Powdered socotrine aloes.....30 grains.  
 Powdered gum myrrh.....15 grains.  
 Solid extract licorice.....30 grains.

Mix the ingredients. Divide into 30 pills. Two pills three times a day. If they act too freely on the bowels, the dose must be reduced.

- 165 R. Powdered Cape aloes.....1 dram.

Divide into 15 powders. Dissolve one powder in a half teacupful of warm milk. Inject the mixture into the rectum every hour until a painful tenesmus be produced. The latter procedure is exceedingly effective in restoring the menstrual flow in all cases when the cessation is due to functional causes.

#### SUPPRESSION OF THE MENSES FROM CHRONIC DISEASE.

It is always very important to ascertain the cause of amenorrhea before adopting any course of treatment, otherwise the patient may sustain great injury. The treatment of an acute attack of menstrual suppression would be not only useless but injurious in a case of chronic amenorrhea. In the former the patient has the vital stamina and the surplus blood to properly perform the function. Some local obstruction only requires to be removed; in the latter case she has neither the vital fluid nor the strength to spare.

In fact, menstruation has been suspended simply because Nature is no longer adequate to the duty. This condition is observed in all chronic diseases by which the vital stamina is gradually exhausted. Although menstruation is necessary to perfect feminine health, it is not necessary to life; therefore, when Nature finds herself unable to perform the whole round of



her duties, she drops the least essential physiological operations. The treatment of this form of amenorrhea is subsidiary to the measures employed for the relief or cure of the grave diseases of which it is only a symptom, the discussion of which does not fall within the scope of this work.

#### VICARIOUS MENSTRUATION.

When the womb fails from any diseased condition to pour forth a certain amount of blood every month, the feminine system finds relief, not very unfrequently, by causing hemorrhagic discharges from different parts of the body for the purpose of replacing the uterine flow; this is called vicarious menstruation. Physiological operations, by which one organ is enabled to partially perform the functions of another when the latter is diseased, are strictly in accordance with natural law. Thus the kidneys often do a part of the work devolving on the skin when the latter is obstructed; on the other hand the skin frequently comes to the relief of the kidneys when these are disordered. It has been observed that when any organ other than the womb assumes the menstrual function, it is usually one previously weakened by disease. The hemorrhagic discharges of vicarious menstruation often take place from the mucous membrane lining the lungs, nose, stomach, bowels, and bladder; but they have frequently been observed to flow from the eyes, ears, gums, nipples, armpits, old scars, ulcers, tumors, and from the skin generally. To those who are unacquainted with the nature and course of such hemorrhages they seem very alarming; but experience has shown that even copious losses of blood from unusual places, due to men-



strual irregularities, rarely produce serious mischief, and are probably not without direct benefit to the system generally. The proper menstrual fluid is blood mixed with mucus; but the fluid issuing from divers parts of the body in vicarious menstruation is pure blood. The flow appears without warning, and trickles from the bleeding surface very much as blood percolates through a cloth, and commonly ceases without treatment as suddenly as it began.

As this curious phenomenon commonly occurs in nervous women of delicate health, it often occasions, both to the patient and her friends, great alarm; but their fears will be allayed when the true nature of the hemorrhage is indicated by the simultaneous occurrence of amenorrhea with the general symptoms usually accompanying menstruation preceding the discharge of blood from some unusual part of the body not attended by the general disturbance that might be expected from such hemorrhage.

The fact that vicarious menstruation rarely, if ever, terminates seriously, furnishes ample proof that it is by no means so formidable as it looks. Nor does the health of the organ or part from which the hemorrhage proceeds ever seem to be unfavorably affected.

*Treatment.*—Although this disorder terminates happily in the great majority of cases, yet great care should always be exercised when the blood proceeds from the more important and delicate organs lest serious mischief should be sustained. When an attack of vicarious menstruation declares itself suddenly, nothing should be done to stop the hemorrhage except it becomes very copious; if the hemorrhage requires to be checked prescription 166 may be given, usually with excellent effect:



166 R. Fluid extract ergot.....2 ounces.

Twenty drops to one half teaspoonful in water every two hours until three or four doses have been taken.

If the bleeding part be accessible, pressure, properly applied, will always control the flow. When the blood comes from any internal organ quietude will greatly assist in bringing about the same result. During the menstrual interval every means should be used to improve the general health of the patient. If she needs a combination of vegetable and mineral tonics, prescriptions 167, 168, 169, or 170 will prove very effective :

167 R. Tincture chloride of iron..... 3 drams.  
Muriate of quinine.....20 grains.  
Glycerine..... 1 ounce.  
Water to make..... 4 ounces.

One teaspoonful in water after meals.

This remedy should be taken preferably through a tube.

168 R. Bitter wine of iron..... 3 ounces.  
Fowler's solution.....30 drops.  
Glycerine..... 1 ounce.  
Water .... 1 ounce.

One dessert-spoonful after meals in water.

169 R. Carbonate of manganese.....1 dram.  
Carbonate of iron.....1 dram,  
Granulated sugar.....2 drams

Triturate the powders in a mortar ; divide into thirty powders. Take one powder after meals in a little sweetened water.



- 170 R. Phosphate of iron .....30 grains.  
 Phosphate of manganese.....30 grains.  
 Dilute phosphoric acid..... 6 drams.  
 Elixir Peruvian bark..... 2 ounces.  
 Simple syrup..... 2 ounces.

Shake the bottle. Take one teaspoonful after meals in a little water if preferred.

As the next menstrual period approaches the bowels may be moved for several days by means of the following gentle laxatives. Violent purging must be avoided, as that would be apt to defeat the end in view.

- 171 R. Fluid extract buckthorn bark.....2 ounces.  
 Fluid extract butternut bark.....2 ounces.

One or two teaspoonfuls two or three times a day or a dessert or tablespoonful may be taken before retiring for the night. The remedy should be diluted with water.

- 172 R. Sulphate of soda..... $\frac{1}{2}$  ounce.  
 Phosphate of soda..... $\frac{1}{2}$  ounce.  
 Ginger tea.....4 ounces.

Dissolve the medicines in the tea, and take one-fourth of the whole quantity. If no laxative action be observed at the end of three hours, another dose may be taken.

Large mustard plasters or Spanish fly drafts should be applied to the insides of the thighs. These powerful applications must be removed as soon as the skin is thoroughly reddened; they should never be kept on until blistering has occurred.

Warm mustard foot-baths are very useful. These means of cure will rarely fail, but if they should disappoint expectations no local treatment can be used effect-



ively until the near approach of the next menstrual period. Under these conditions the treatment already prescribed must be tried again, combined with the use of electricity, either by means of the induced current, or still better by the cautious introduction of an intra-uterine stem pessary of the sort recommended by Sir James Simpson of Edinburgh. The re-establishment of the menstrual discharge by the natural outlet may be confidently expected by the diligent use of these measures.

#### PAINFUL MENSTRUATION.—DYSMENORRHEA.

In discussing the various forms of disease incident to women we have avoided, as far as possible, all artificial divisions, except where these were absolutely necessary to the proper comprehension of the disease and its treatment. In the disorder under consideration these divisions are unusually numerous, but are necessary, because dysmenorrhea is not so much a disease as the prominent symptom of several very different pathological conditions. Thus we have neuralgic, inflammatory, congestive, membranous and obstructive dysmenorrhea. When the generative organs are perfectly healthy no pain whatever accompanies the menstrual discharge.

In point of fact, however, there is almost universally more or less local discomfort, often accompanied by general lassitude attending the menstruation of civilized women. The term dysmenorrhea is not applied to these minor pains, but is reserved for diseased conditions in which the pain is severe.

Sometimes it accompanies the first menstruation, and has been known to continue until the natural cessation of the function.



The amount of pain varies greatly : in some it is moderate, continuing only a few hours, ceasing spontaneously or yielding readily to domestic treatment ; or it may be so agonizing as to cause fainting, and undermine the woman's health by the severe and continued suffering. The character of the pain and the symptoms accompanying it are subject to great variations in different cases.

#### NEURALGIC DYSMENORRHEA.

The disorder bearing this name is observed most frequently in women who are liable to attacks of neuralgic pain in other parts of the body. In these patients such trifling causes as moderate fatigue in walking or sight-seeing, a draft of cold air, a slight diarrhea, mental worry or any depressing influence, will bring on an attack of neuralgia. As the pelvic nerves doubtless participate in the general neuralgic tendency existing in such subjects, it need not surprise us if they be often the seat of severe pain when the pelvic organs and nerves are undergoing so notable an upheaval as occurs when ovulation and menstruation are in progress.

The fact that no organic disorder of the uterus or its appendages can be discovered by the most careful examinations is another cogent reason for applying the term neuralgic to this form of painful menstruation.

*Symptoms.*—A frequent symptom is headache of a neuralgic character that sometimes alternates with the pelvic pain. Cases are sometimes observed where the uterine pain shifts back and forth from the womb to various parts of the body. The distress is commonly felt first in the lower part of the back, and extends with more or less rapidity around to the abdomen and down



the thighs. Like other neuralgias it usually occurs in paroxysms, with intervals of comparative or perfect ease.

The amount of suffering is variable, depending largely on the condition of the patient's nervous system generally; but it is perhaps greater than in any other form of dysmenorrhea. The distress may show itself before the flow begins, and disappear as soon as it is fully established, or it may continue with varying intensity during the whole menstrual period.

The discharge may be scanty or profuse, or about the quantity natural to the individual. The color is, however, usually paler than the normal shade, because the blood of these patients is often very watery.

Of course such severe suffering cannot be frequently repeated without sooner or later disordering the general health; particularly if the neuralgic distress does not wholly cease when the menstrual function is over for the month. In some cases the headaches and back-aches often recur or perhaps never completely cease from one period to the other; always becoming, during the menses, distressingly severe. Under these circumstances the patient gradually loses flesh, strength, and courage; her digestion becomes enfeebled, her bowels constipated, and her health seriously impaired.

*Treatment.*—If the pain be felt only for a short time before or at the beginning of the flow, and if opium or any of its preparations agrees with the patient, either of the following prescriptions will afford temporary relief:

173 R. Powdered opium.....10 grains.  
Solid extract of belladonna..... 1 grain.  
Powdered licorice root.....40 grains.  
Glycerole of starch, a sufficient quantity.

**Mix** the ingredients. Divide into 6 suppositories.



One may be placed in the rectum when pain requires to be relieved.

- 174 R. Sulphate of morphia . . . . . 2 grains.  
 Solid extract belladonna . . . . . 2 grains.  
 Powdered licorice root . . . . . 40 grains.  
 Glycerole of starch, a sufficient quantity.

Mix the ingredients. Divide into 8 suppositories. One may be placed in the rectum when pain requires to be relieved. If opium affects the patient unfavorably, the following prescription will almost invariably afford relief, without causing any disagreeable effects.

- 175 R. Chloral hydrate . . . . . 40 grains.  
 Syrup of tolu . . . . . 1 ounce.  
 Water . . . . . 3 ounces.

Mix the ingredients. Use one-half of the above quantity for one injection. Repeat in two or three hours if necessary.

If the suffering continues throughout the whole course of the menstrual period, opium or morphia is not admissible, even if it agrees well with the patient: because if she be kept continuously under its influence for days, there may be danger that persons of weak and yielding natures would have more or less difficulty in relinquishing its use after the pain passes away. Although prescription 176 possesses very moderate anodyne properties, it sometimes relieves the pains of dysmenorrhea like magic.

- 176 R. Fluid extract skullcap . . . . . 1 ounce.  
 Compound decoction of socotrine aloes . . . . . 1 ounce.

One or two teaspoonfuls every two or three hours, until relief has been obtained. But if relief be not secured by three or four doses, especially if the medicine



has acted freely on the bowels, it will be useless to persevere with the remedy.

Prescription 177 frequently affords prompt and permanent relief after other remedies have failed.

177 R. Tincture of gelsemium .....1 ounce.  
Tincture of Virginia snake root .....1 ounce.

Twenty drops every hour until two, or at the most three doses have been taken, or the pain is relieved.

Prescription 178 is very valuable to patients who have a rheumatic tendency. In rare cases the pain seems at first to be increased, but by a little perseverance a cure is often obtained.

178 R. Ammoniated tincture of guiacum.....2 ounces.  
Half a teaspoonful in water three times a day.

A sea voyage often succeeds after other means have failed : particularly in patients whose residences before the voyage were in the interior. In a large number of cases, maternity effects permanent cures.

During the menstrual interval, every means having a tendency to improve the health, should be used diligently. The bowels must be kept soluble by a laxative diet if possible, rather than by medicines. If any remedy of the latter sort be demanded occasionally, prescriptions 179 or 180, will act gently but effectively.

179 R. Grated orange peel.....1 dram.  
Powdered Turkey rhubarb .....1 dram.  
Powdered cream of tartar .....1 dram.  
Oil of aniseed.....3 drops.

Triturate the ingredients in a mortar. Divide into 6 powders. One or two powders may be taken in a little water when a laxative action is required.



- 180 R. Fluid extract butternut bark .....2 ounces.  
Fluid extract buckthorn bark .....2 ounces.

One to three teaspoonfuls in water, when a laxative action is required.

The skin should be made active, and kept so by baths of pure water, or by water having a suitable proportion of Ditman's sea salt dissolved therein. Exercise stopping short of fatigue, should be taken daily in the open air. The patient's bedroom must be carefully ventilated, especially at night. If there be a grate in the room, a current of air may be made to flow up the chimney by burning a coal fire, or by placing in the grate a large kerosene oil lamp. Almost all neuralgic patients are notably benefited by iron in some form, either with or without a vegetable bitter. No one preparation containing iron should be taken for a longer period than two weeks, because in about that time it ceases to do the patient so much good as at the beginning.

If it be considered desirable to continue the use of medicines of this sort, some other form or combination of iron ought to be substituted. Prescriptions 181, 182, 183, and 184, are all very effective preparations, and may be relied on confidently when iron is required.

- 181 R. Reduced iron .....1 dram.  
Sulphate of quinia .....1 dram.  
Glycerole of starch, a sufficient quantity.

Triturate together in a mortar the two first ingredients, make them into a mass with the third. Divide into 30 pills. One pill after meals.



- 182 R. Ammonio citrate of iron.....30 grains.  
 Simple syrup..... 1 ounce.  
 Brandy ..... 1 ounce.  
 Water..... 2 ounces.

Dissolve the iron in the water, and add the other ingredients.

One or two teaspoonfuls after meals.

- 183 R. Tartrate of iron and potash ..... $\frac{1}{2}$  ounce.  
 Glycerine ..... 2 ounces.  
 Syrup of orange peel..... 2 ounces.  
 Water..... 2 ounces.

Dissolve the iron in the water, and add the other ingredients. Dessert-spoonful after meals.

- 184 R. Citrate of iron and quinine.....3 drams.  
 Glycerine.....1 ounce.  
 Syrup of orange peel..... 2 ounces.  
 Water ..... 3 ounces.

Dissolve the first ingredient in the water, and add the others.

One teaspoonful after meals.

#### CONGESTIVE DYSMENORRHEA.

As each menstrual period approaches, an unusual flow of blood takes place to the womb and its appendages, amounting to congestion in them and in all the adjacent tissues. Up to a certain point, this is perfectly natural and necessary; but when it becomes excessive from any cause, it gives rise to pain during menstruation of the sort called congestive dysmenorrhea.

*Causes.*—When the blood-making powers of the body are too active, a somewhat rare condition among American women, the quality of the vital fluid becomes too



rich, and the quantity too great for the vital purposes. Plethora is the name by which this condition is known. Plethoric women are specially liable to congestion of all the internal generative organs, accompanied by pain at every menstrual period.

The powerful influence of cold in causing congestive dysmenorrhea is too well known to require more than simple mention.

Sudden mental disturbance from depressing passions or evil tidings powerfully disturb the circulation, and produce pelvic congestion, particularly if the menses be approaching.

The circulation through the liver is intimately connected with that flowing through all the intestinal and pelvic viscera, by the portal circulation. When the liver is in the condition popularly known as torpid, its circulation is notably obstructed, the upward venous circulation is thus prevented returning freely from all the organs below: congestion of the mucous membrane lining the womb is thus induced, leading directly to the sort of dysmenorrhea under consideration.

The important influence of displacements in causing congestion by obstructing the circulation through the womb, has been already alluded to.

*Symptoms.*—This form of painful menstruation is usually accompanied by notable constitutional disturbance. The patient suffers from severe pain in the womb, the discharge is delayed, and is scanty. She is feverish, her skin is hot and dry, the pulse frequent and full, eyes suffused and watery, with restlessness, nervousness, severe headaches, and occasionally slight delirium.

*Treatment.*—If the painful disorder be caused by plethora, the blooming patient must confine herself to



a spare diet, and take every alternate night or morning, a cathartic dose of prescription 185 :

185 R. Sulphate of soda..... 1 ounce.  
Dilute sulphuric acid .....20 drops.  
Ginger tea..... 4 ounces.

From one-third to the whole of the above preparation may be taken at one dose to produce a cathartic effect. Patients who have never before tried the remedy, should begin with the smallest dose, likely to be effectual.

The patient should exercise freely in the open air between the periods, but she should keep quiet for a day or two before the menses are expected.

If the trouble has been caused by exposure to cold, the diligent use of warm sitz and foot-baths, with hot bottles about the hips, and between the thighs, while the patient is covered up in bed, will be very useful. If the pain be not perfectly relieved by these means, and opium, or its salts, do not agree with the patient, the following prescription will be successful in affording temporary relief from pain :

186 R. Powdered opium.....10 grains.  
Solid extract belladonna..... 1 grain.  
Powdered licorice root.....30 grains.  
Glycerole of starch, a sufficient quantity.

Make the medicines into a mass. Divide into five suppositories. To relieve pain introduce one into the bowel when pain is severe.

The use of either the following prescriptions, will probably complete the cure,



- 187 R. Powdered pleurisy root.....  $\frac{1}{2}$  ounce.  
 Powdered boneset.....  $\frac{1}{2}$  ounce.  
 Powdered bloodroot..... 30 grains.  
 Nitrate of potash..... 2 drams.

Triturate in a mortar. Divide into 24 powders. Give one powder every two or three hours, until the patient perspires freely.

- 188 R. Fluid extract jaborandi..... 1 ounce.

Fifteen to twenty drops every forty minutes in water, until the patient perspires freely. The above is one of the most active known remedies for inducing perspiration.

If there be reasons to believe that the uterine congestion is due to a torpid liver, prescription 189 will be effective in stirring up that organ, especially if combined with active exercise in the open air:

- 189 R. Fluid extract bloodroot..... 1 ounce.  
 Fluid extract wahoo..... 8 ounces.  
 Fluid extract pokeroot.....  $\frac{1}{2}$  ounce.  
 Fluid extract mandrake..... 1 ounce.

Enough of the above mixture should be taken to act gently on the bowels once or twice a day. The dose usually required is from fifteen drops to one teaspoonful in water three times a day, about one hour after meals, but the dose may be increased to two teaspoonfuls if necessary.

If the dysmenorrhea be caused by some obstruction, a surgical operation may constitute the only effective remedy. If uterine displacement be the offending condition, means must be used to put the uterus where the blood circulation through the vessels shall not be obstructed by an improper position. Before a radical cure can be obtained in the most difficult cases, the cause of the dysmenorrhea must be ascertained and removed.



## INFLAMMATORY DYSMENORRHEA.

This form of painful menstruation is the most frequent of all the various kinds of dysmenorrhea: a fact that is readily understood when we know how very common inflammation of some part of the womb and its appendages is, and how readily an inflamed tissue becomes very painful when active congestion is added to chronic inflammatory action. The local chronic disease may be of so mild a character that it gives the woman very little trouble between the periods, only causing pain when the excitement accompanying the menstrual function occurs. Sometimes the chronic uterine disorder is of so grave a character that the patient is miserable, not only at the menstrual periods, but all the time. This symptom, with the fact that leucorrhœa of a clear, glairy, or whitish appearance is present between the periods, constitutes the chief means of distinguishing between this and other forms of painful menstruation.

*Treatment.*—As we have already stated, a large amount of blood flows to the womb at the approach of the menstrual period. When the pelvic organs are fairly healthy, little or no pain is caused by this temporary and natural congestion. But when some part of the uterus is chronically inflamed, the monthly congestion causes the chronic disorder to assume the acute type, which condition is accompanied by pain, sometimes of a very severe character.

The following prescription may be used successfully to relieve the fever by which inflammatory dysmenorrhea is ushered in:

190 R. Tincture of aconite root.....5 drops.  
Water.....4 ounces.



Stir, and give one teaspoonful every fifteen minutes until the fever abates.

Warm hip and foot baths should be used every two or three hours. These simple but valuable remedies do great good both by soothing the patient and promoting the flow of the menses by which the uterine inflammation and pain are relieved.

The bowels should be relieved either by the use of suitable enemias or by the following laxative :

191 R. Fluid extract butternut bark .....2 ounces.

One, two, or three teaspoonfuls in water, as may be required.

During the interval between the periods much benefit may be obtained by judicious hygienic management. The patient should take exercise freely in the open air; if the weather be cool or cold, the body should be warmly clothed, particularly the feet and limbs. During very cold weather a suit of chamois underclothing, worn over the flannels, is a better protection from the cold than two or three thicknesses of flannel.

At the same time, the following uterine tonic should be taken regularly :

192 R. Fluid extract false unicorn root.....2 ounces.  
 Fluid extract life root .....2 ounces.  
 Fluid extract star grass.....1 ounce.

Half teaspoonful in water one hour after meals.

The patient should take an injection, made after the following prescription, every alternate day between the periods :



193 R. Bicarbonate of potash.....1 dram.  
Hot water..... 1 quart.

This injection should be taken as hot as the patient can comfortably bear it. These means, diligently employed, will secure excellent results.

#### MEMBRANOUS DYSMENORRHEA.

This form of painful menstruation is the rarest of all the varieties of dysmenorrhea. The pain is caused by the complete separation of the thick, tough mucous membrane lining the womb, and of the contractions of the organ while expelling the exfoliated membrane, either entire or in shreds of different sizes. Many physicians who had never seen a specimen of this disease, have denied the possibility of the exfoliation of the mucous membrane from the inside of the womb ; but when the discharged membrane is examined microscopically it is seen to possess all the follicles, glands, blood-vessels, and openings distinguishing the lining of the womb from every other structure. The pain commences in this kind of dysmenorrhea as soon as the membrane begins to be detached, and continues with intermissions but usually with increasing severity until it is finally expelled from the womb. The character of the disease is unmistakably declared when the peculiar membrane makes its appearance, if not before.

*Treatment*—All the means that are usually found to be effective in improving the general health should be diligently employed. A sea voyage or a winter's residence in the South often effects a permanent cure. If these means fail, treatment at the hands of an expert alone will succeed.



## OBSTRUCTIVE DYSMENORRHEA.

The menstrual fluid first appears in minute drops on the surface of the membrane lining the womb ; from thence it trickles into and fills its cavity ; if it finds ready egress, and the uterus is otherwise healthy, the flow is quite painless ; but if any obstruction exists by which the blood is imprisoned in the womb, the latter is excited to contract on and expel its unwelcome contents.

Although the contraction of muscles generally is quite painless, vigorous contractions of the womb are always attended by pain, both in the virgin state and at parturition. The obstruction may exist either in the neck of the uterus or in any part of the genital canal.

*Causes.*—The opening of the body of the womb through the neck is naturally very small. In women who have never been mothers it is specially minute just before it expands into the uterine cavity. A very slight inflammation, with or without the effusion of plastic lymph at this point, may readily narrow the passage so as to obstruct the outflow of the menstrual fluid. The application of strong caustics by medical men in the treatment of uterine diseases is almost universal. Now when the flesh is burned by a corrosive chemical, the scar that forms during healing is very apt to contract. When this occurs at the naturally small opening of the uterine neck it very often renders it so much smaller that the menstrual fluid cannot escape freely. Hence some cases of the disorder now under discussion are caused by harsh and unskillful medical treatment. Sometimes the womb is bent on itself, the body falling backward or forward while the neck remains in the proper position : by this sort of displacement the passage from the



uterus is obstructed in precisely the same way that the flow of water through a rubber tube is obstructed by a kink.

Occasionally, during very tedious labors, the mucous membrane of the vagina is so severely stretched and contused that it sloughs off. When this occurs the raw surfaces coming in contact heal together during convalescence. The vaginal canal is sometimes so narrowed in this way that the menstrual discharge cannot escape.

A small polypus, not larger than a marrowfat pea, has been known to hang from the uterine mucous membrane by a pedicle long enough to allow it to drop down on the internal opening, completely closing it like a ball valve, causing pain during the menses of the severest character. A complete cure can be attained in such cases only by the removal of the polypus.

Fibrous tumors are not rarely found growing in the substance of the neck of the womb so as to block up the passage.

When the womb is displaced either backward or forward, the mouth of the organ is sometimes pressed so firmly against the side of the vagina that it is completely closed just as the mouth of a bottle is closed by pressing the palm of the hand against it. Under these circumstances the menstrual fluid is refused egress, and causes spasmodic pain if it be retained in the uterus.

*Symptoms.*—After the collection of blood in the uterine cavity becomes sufficient to fill it, severe spasmodic pain occurs due to an effort of the womb to empty itself. If it be attended by success complete relief is commonly obtained until the uterus is again distended



by menstrual fluid, when the same painful process is repeated.

*Treatment.*—As surgical procedure is alone effective in such cases, a skillful specialist should be employed to ascertain the cause and remove it, a result that can almost invariably be attained.

#### STERILITY.—BARRENNESS.

Impregnation occurs when the female ovum is fertilized by contact with the proper vitalizing fluid. This interesting process may take place either in the womb, the Fallopian tubes, or the ovaries. Experiments on the lower animals have, however, proved that fruitful contact of the two elements takes place, in the vast majority of instances, in the ovaries; after which the fertilized ovum is conducted along the Fallopian tubes to the womb, where immense preparations have been made for its reception. The uterine mucous membrane throws up and around it a protective covering by which it is fixed to the inside of the womb. Conception is then said to have taken place. When we consider that all the conditions of this intricate process must be just right to be successful, we are surprised that barrenness is not much more frequent than it is.

*Causes.*—If any of the organs of generation be congenitally absent or exist in a rudimentary condition conception cannot occur. Sometimes the hymen is so tough that the passage is completely closed. Occasionally the passage is obstructed by cicatrices, as already pointed out in discussing obstructive dysmenorrhea. That portion of the uterine neck which projects down into the vagina is naturally less than one inch in length, and the orifice to the womb opens in the centre of a



slight depression; but in some cases the neck is very much longer and of a conical shape: where the neck of the womb is deformed in this way experience has proved that conception rarely if ever occurs. When the inside of the womb is chronically inflamed it constantly pours forth a clear, tough, ropy or whitish leucorrhœa which blocks up the mouth of the uterus as effectually as if plugged up by some solid material.

But not only does this secretion mechanically prevent conception—it also quickly destroys the vitality of the vivifying male fluid when mixed with it. Therefore, women who suffer from severe chronic inflammation of the inside lining of the womb are almost invariably barren. Uterine polypi, when of small size, do not seem to prevent conception, but gestation rarely continues to the full time; miscarriage usually takes place about the third month. Displacements render impregnation difficult, because the womb is thrown either forward, causing it to press on the bladder, or moved backward into the hollow of the sacrum, or it may be prolapsed on the perineum. The bell-like mouth of the Fallopian tube is not closely connected with the ovaries, and consequently is sometimes drawn away from the latter organs by severe uterine displacements or by adhesions due to the pouring out of plastic lymph during an attack of pelvic peritonitis. Under these circumstances the Fallopian tubes cannot conduct the fecundating fluid to the ovaries: nor can they grasp the escaping ovum to carry it to the womb for development. The membranous variety of dysmenorrhea already described is a complete prevention to conception, because although an ovum may be impregnated and conveyed to the womb in the proper manner it is necessarily cast off with the exfoli-



ated mucous membrane in which it is embedded : and even if it arrives in the womb after the expulsion of its lining, as the organ is diseased it is not prepared to receive and nourish the ovum.

Profuse menstruation renders conception difficult by preventing the fixation of the ovule in the uterus and by the free flow of blood sweeping it out, when it necessarily perishes.

*Treatment.*—If any of the sexual organs be congenitally absent no remedy is possible.

When the uterus is rudimentary, in some cases it may be developed. If the hymen be abnormally tough, it must be dissected out. If the mouth of the womb be too small it should be enlarged. When the neck is long and conical it ought to be shortened by a surgical operation. Uterine polypi must be removed before a cure can be expected. If the womb be displaced so badly that we have reason to believe the sterility must be due to the dislocation, the uterus should be put as near its proper place as possible, and kept there by suitable methods of support.

When the menses are profuse the discharge may usually be controlled by the use of prescriptions 194 or 195.

- 194 R. Oil of cinnamon bark.....1 dram.  
 Oil of Canada fleabane.....1 dram.  
 Whiskey.....2 ounces.

Half a teaspoonful in water three times a day, preferably one hour after meals.

- 195 R. Dilute sulphuric acid.....6 drams.  
 Oil of cinnamon bark.....1 dram.

Ten to twelve drops in water every three or four hours,



If the sterility be caused by adhesions internally there are no effective methods of treatment. The natural motions of the parts due to respiration often effect a cure by gradually wearing out the constricting bands.

There are some cases of sterility that resist all treatment, although no tangible cause can be discovered. But with a correct diagnosis and suitable treatment the difficulty can often be removed.

Sterility is only a prominent symptom of some disorder which must be searched for and removed before a cure can be expected. In those cases where no tangible cause can be discovered prescription 196 is sometimes successful.

196 R. Fluid extract damiana.....3 ounces.  
Fluid extract cotton root bark.....1 ounce.

One teaspoonful in water one hour after meals.

#### THE CESSATION OF MENSTRUATION—MENOPAUSE, KNOWN AS THE “CHANGE OF LIFE.”

The menses begin at the average age of fifteen years, and continue from thirty to thirty-five years; the final cessation, therefore, commonly occurs between the ages of forty-five and fifty. This time of life is much dreaded by middle-aged women, from the belief that their lives are then in special danger. Although there are dangers to which women are exposed during the cessation of the menses, yet statistics have proved that about as large a proportion of females die between ten and twenty as between forty and fifty years of age.

Every period of life—infancy, youth, middle age and old age—has its peculiar physical dangers, but they are not much greater or more numerous at the menopause than at other periods. The lives of matronly ladies are



quite as safe as those of men at the same time of life ; and after women have passed the change of life safely, their prospect of living to old age is decidedly better than that of men.

The proportion of the sexes among persons who live to the age of one hundred years or thereabout is usually as near as possible seven women to three men.

It cannot be denied that there are peculiar dangers and discomforts attending, although not caused by, the menopause, which are sometimes fatal. Yet the economy of the vital forces, resulting from the quietude of the feminine system, afterward exerts on woman's health generally a very favorable influence. A few people who attempt to cross the ocean lose their lives by the attending dangers ; yet the good effects of a sea voyage on the health of the immense majority who cross safely greatly overbalances the fatal injury to the few. Again, some women die because of pregnancy and child-birth ; yet it is well known that as soon as a married woman becomes pregnant her prospect of long life is increased, the general influence of pregnancy and parturition on the feminine constitution being eminently conducive to longevity.

*Symptoms.*—If a woman has a vigorous constitution her menses will probably cease gradually between the ages of forty-five and fifty years, the discharge becoming less and less at each period, and the color lighter ; or the flow may intermit for a month or two, and then reappear, the intervals gradually becoming longer until the menses cease altogether. The cessation of the catamenial discharge is often the beginning of improved health, both local and general. The woman gains flesh, the abdomen and breasts enlarge, the stoutness



often observed in middle-aged ladies being developed. But if the woman be delicate, she is liable to a variety of disorders. The menses are apt to become profuse, sometimes amounting to copious hemorrhages.

Important changes also occur both in the uterus and its appendages. The Fallopian tubes shrivel, and are not unfrequently quite obliterated. The uterus diminishes in size, and that portion of the neck which projects down into the vagina decreases in size, and sometimes almost disappears. In many old women the orifice is found to be flush with the roof of the genital canal. In a large number of cases there is, after the cessation of menstruation, complete closure of the opening into the womb.

The ovaries also become shrivelled, greatly diminishing in size; the surfaces become wrinkled, resembling the surface of a peach kernel.

Many women suffer greatly during the menopause, from what are popularly called "hot flashes." Although this affection does not usually result in serious consequences, it is sometimes the precursor of grave nervous disorders. During the attack the veins of the neck are compressed, and the capillaries of the brain and surface of the body become instantly filled with blood, accompanied by a distressing sensation of heat, and often more or less vertigo. These symptoms rapidly subside, and are succeeded by coldness, chills, and perhaps faintness, with perspiration over the whole surface of the body. The paroxysms usually recur frequently during the day, and are sometimes so violent as to wake patients out of their sleep.

*Treatment.*—The cessation of the menses is a perfectly natural process, and requires no medical treatment



when not complicated. Hygienic measures are, however, important. The woman should protect herself from injury; cold and wet are specially prejudicial. The cares of life should be shifted to younger shoulders as far as possible. All disorders that occur during the change of life, such as prolapsus, ulceration, hemorrhages, etc., should be treated by the measures laid down for those diseases elsewhere in this work.

Prescription 197 is a remedy of very great value for the hot flashes from which these ladies suffer so much. Its use is almost invariably followed by a cure.

197 R. Nitrite of amyl.....	1 drop.
Simple syrup .....	2 ounces.
Water.....	1 ounce.

Shake the bottle every time a dose is measured. Take one teaspoonful every three hours. This medicine should be kept in a cool, dark place.

#### ANÆMIA.—CHLOROSIS.—GREEN SICKNESS.

This disease is specially liable to appear in young girls about the time of puberty, and is therefore connected with the development of the reproductive functions in all probability. Chlorosis frequently occurs in young women who have not been overworked nor suffered any undue loss of blood, and have had an abundance of nutritious food: yet the disorder consists largely in an impoverished condition of the vital fluid. Eating food is one thing, and its proper digestion and assimilation are very different processes. The trouble with a girl who suffers from the disorder under consideration is not that the appetite is always poor, for that is often good; but her capacity to make good rich blood out of the food she consumes is defective.



This is the essence of the disease, and its proper appreciation is requisite as a basis for successful treatment.

During health the vital fluid contains in one thousand parts about one hundred and thirty parts of red blood globules ; but in chlorosis the proportion has been reduced to eighty or sixty parts in one thousand of blood, and in severe cases even lower than this. The quantity of blood by measure is not diminished, the vessels are always full except for a very short time after a copious hemorrhage : the quality of the vital fluid in chlorosis alone is at fault.

*Symptoms.*—The power of the circulation in chlorotic girls is diminished, the surface of the body is cooler than natural, and the extremities are notably cold. The action of the heart is feeble, and the pulse is small, weak and compressible. Slight causes disturb the action of the heart; distressing palpitations are frequent; the mind is sluggish and the muscular strength diminished. Therefore, both intellectual and muscular effort speedily induce great fatigue. The skin is pallid, the complexion is of a pale, dingy, waxy hue, and in severe cases it has a greenish shade, hence the name chlorosis. In some cases, although the anæmic condition be well established, the complexion still retains some healthy color. The insides of the mouth and eyelids are paler than natural. The urine is often as clear as water, and is passed in unusual quantities. Neuralgia is apt to annoy anæmic patients. The skin of the abdominal wall is often almost as tender as the ball of the eye. Nervous disorders of various sorts are very common. Hysteria is a frequent complication. The spinal column from the roots of the hair down to the



coccyx is often very tender. If the examiner's ear be placed at the root of the patient's neck over one of the jugular veins, a loud, cooing sound will be heard, caused by the passage of the thin, watery blood down through these great veins.

*Treatment.*—The chlorotic patient should desist from all intellectual and physical work. She must have an abundance of nourishing and digestible food : she should spend much of her time in the open air taking gentle exercise, always stopping short of fatigue. In cool or cold weather she must be very warmly clothed. Chamois underclothing worn over the flannels secures this object much better than double flannels. The medicinal treatment should consist, first, in the administration of a gentle laxative to prepare the digestive organs to assimilate tonic remedies of various kinds. Active purging should, however, be carefully avoided. The following prescriptions will serve the purpose admirably.

198 R. Podophyllin..... 2 grains.  
Solid extract belladonna..... 2 grains.  
Red pepper.....10 grains.  
Powdered rhubarb.....40 grains.  
Glycerole of starch, a sufficient quantity.

Make into 30 pills. One or two pills twice a day until a laxative effect be obtained.

199 R. Fluid extract buckthorn bark..... 2 ounces.  
Fluid extract butternut bark..... 2 ounces.  
Fluid extract belladonna.....10 drops.

One to three teaspoonfuls once or twice a day, as may be required to produce a laxative effect.



A few doses of either the above preparations should be used occasionally to keep the mucous membrane of the intestinal tube free from sticky secretions ; by this means its powers of absorbing nutritive materials will be preserved unimpaired.

The use of medicines containing iron combined with bitter tonics should now be commenced and continued for lengthened periods, if need be until a cure can be effected.

Prescriptions 200, 201, 202, 203 or 204 will be found very efficacious. When one compound seems to lose its curative effect another should be substituted.

200 R.	Phosphate of iron.....	20 grains.
	Dilute phosphoric acid.....	2 drams.
	Syrup of orange peel.....	1 ounce.
	Simple syrup.....	1 ounce.
	Whiskey.....	1 ounce.
	Water.....	1 ounce.

A dessert-spoonful in water after meals. Shake the bottle before measuring the dose, as the iron salt is apt to settle to the bottom.

201 R.	Tincture muriate of iron.....	3 drams.
	Muriate of quinine.....	24 grains.
	Fowler's solution.....	30 drops.
	Glycerine.....	2 ounces.
	Spirits of cinnamon.....	2 drams.
	Water to make.....	4 ounces.

One teaspoonful in water after meals. This remedy should be taken through a glass tube ; but if not, injury cannot be done to the teeth by it if the dose be properly diluted with water.



- 202 R. Citrate of iron and quinine.....30 grains.  
 Syrup of lemons.....  $\frac{1}{2}$  ounce.  
 Catawba wine... .. 2 ounces.  
 Water..... 2 ounces.

One teaspoonful in water after meals.

- 203 R. Pyrophosphate of iron.. .. 60 grains.  
 Curaçoa.....  $\frac{1}{2}$  ounce.  
 Glycerine..... 1 ounce.  
 Hot water to make..... 4 ounces.

Dissolve the iron in the water, add the other ingredients. Take one teaspoonful in water half an hour after meals.

- 204 R. Tartrate of potash and iron.....90 grains.  
 Syrup of orange peel..... 1 ounce.  
 Glycerine..... 1 ounce.  
 French brandy.....  $\frac{1}{2}$  ounce.  
 Water to make..... 4 ounces.

Dissolve the iron in the water and add the other ingredients. Take one teaspoonful after meals.

These remedies may be alternated as occasion may require until a cure be effected.

#### ENCYSTED DROPSY OF THE OVARY.—OVARIAN TUMORS.

The ovaries are full of little cells, called Graafian vesicles, in which the ova are developed, and from which they are extruded when quite ripe. The disease under discussion consists of a dropsical condition of one or more of these ovarian cells. Although the Graafian vesicles are naturally very small, they often develop into enormous tumors containing, in some cases several gallons of liquid or semi-solid substance. At first the tumor may consist of but one vesicle, but



as it progresses, other ovarian cells are involved so that finally the mass consists of many cells attached together so closely, that they form a single great tumor. These growths develop almost invariably during the child-bearing period. They are therefore rare under twenty and over fifty, but have been observed in rare cases, as late as sixty years of age. The walls of these tumors vary greatly in thickness, sometimes they are one inch to one inch and a half thick: in other cases scarcely thicker than paper. There are instances where ovarian tumors have remained without increasing in size for thirty, forty, or even fifty years. Sometimes this disease begins by the abnormal development of a single Graafian follicle, which after growing to a certain point ceases before it has attained sufficient size to cause grave consequences.

There is abundance of evidence showing that tumors of this character have been carried by women many years with only a moderate amount of inconvenience. Such prolonged freedom from destructive development cannot, however, be expected in any given case with much confidence. The single encysted tumors almost always continue their growth by reproducing other cysts of the same character. If the ovarian tumor has originally been composed of several follicles the development of an enormous tumor often occurs with greater rapidity by the above process of duplication. As long as the size is moderate, the tumor remains in the pelvis, but when it grows to be about the dimensions of the pregnant womb at the fourth month, it escapes up into the abdomen. The symptoms observed when the tumor is small are not significant; the patient feels as if there may be some uterine displacement. After a still farther



increase in its size and weight, she becomes conscious that there is some heavy body in the pelvis. The menses may be suppressed. The breasts become painful and secrete a milky looking fluid. As the tumor grows, its weight still farther distresses the patient and disturbs the functions of the bowels and the bladder by pressure. After the tumor has ascended into the abdomen, the feeling of weight low down in the pelvis is relieved. The bladder and bowels will probably have been permitted by the ascent of the tumor to resume their functions; but those of the intestines, stomach and liver are apt to suffer by pressure. The action of the diaphragm is impeded, causing distress in breathing; and that of the heart is disordered, inducing severe palpitations.

The general health is unimpaired as long as the tumor is of moderate size, but when it has attained the dimensions of the pregnant womb at the full term, the patient's health has usually suffered seriously. At this stage, or previously, some of the membrane covering the tumor may become inflamed, causing pain, fever, vomiting, tenderness of the abdomen, and other symptoms of inflammation. In some instances, the inflammatory action is sufficiently extensive to prove fatal: in others, such acute attacks never occur, but the sufferer's strength is undermined by difficulty of breathing, distressing sense of distension, sleeplessness, pain, loss of appetite and rest until the emaciated patient finds relief in death.

*Treatment.*—Medicines are often of value in sustaining the sufferer's general health and removing or modifying many of the symptoms arising from the presence of an ovarian tumor before these have become distressing,



but they have no influence whatever in effecting cures. Some tumors growing in the abdominal cavity have undoubtedly disappeared under the use of diuretics, cathartics, liniments, etc., but there are good reasons for believing they were not genuine ovarian cysts; but were due to local inflammation. Various surgical measures have been used for the palliation and cure of these formidable growths. That which now finds most favor is the complete extirpation of the diseased ovary.

Ovariectomy has been the means of saving many valuable lives during the last few years, and of restoring to health many sufferers who would soon have died miserably without the aid of modern scientific surgery.

#### HYSTERIA.

When we consider the almost endless variety of phases in which hysterical affections are manifested and the misery occasioned thereby both to the sufferer and her friends, we are constrained to admit their importance, although the disease can never of itself be charged with directly leading to fatal results.

The old physicians who invented the term believed that hysteria was a constitutional manifestation of some disorder of the female generative system. They blamed the uterus for doing the gentle sex much mischief of which it was entirely innocent. They allowed their patients to believe that the womb sometimes started up under their ribs causing lumps and pain in the side, or that it occasionally undertook longer journeys to the throat or brain: in the former situation they believed it produced a choking feeling as if the patient had tried to swallow something too large to go down; in the latter the sensation was that of a nail being driven into



the head. Modern medical science has abundantly proved that the uterus has little or nothing to do in causing the multiform disease under consideration. It is exceedingly common to observe women who suffer from the severest forms of uterine disease who have not the slightest trace of hysteria: on the other hand the latter disorder may exist in an aggravated form in women whose generative organs are quite healthy. Hysteria is not confined exclusively either to the mental or the physical departments of the feminine nature. It has its seat largely in that almost unexplored territory lying between and connecting mind and matter.

*Causes.*—There can be no doubt but that hysteria is only developed actively in women who have a natural constitutional tendency thereto. On the other hand there are many women in whom the disorder cannot occur. With a strong predisposition to hysterical disorder a great variety of causes may contribute to its development. Whatever tends to enfeeble the body or debilitate and irritate the nervous system acts effectively to invite the disorder. Although tangible disease of the generative system has little or nothing to do in causing hysteria, yet the agency of sexual abuse on one hand, and of prolonged continence on the other can scarcely be doubted. In young women who inherit the hysterical diathesis, excessive anger, disappointments, deep grief, as from loss of dear friends, jealousy, being crossed in love, or other profound emotions, may determine an attack.

The unwholesome state of mind produced by reading too much of the exciting light literature of the day powerfully predisposes to the development of hysteria.



*Symptoms.*—Hysteria being a morbid condition of both mind and body into which nervous disorder enters as a most important element, the symptoms by which it is characterized are almost numberless. The disease is always accompanied by defective vitality, and a morbid susceptibility to emotional feelings with defective will-power in restraining their manifestations. Because of the multiplicity and complicated nature of the symptoms presented by different individuals, we shall give the reader a better view of the curious forms hysteria often assumes by citing a few cases observed in practice.

*Case I.* A young girl about eighteen years of age complained of great pain and absolute loss of power in her legs so as to be quite unable to walk or stand alone. She stated that a few days before her legs had been red and swollen, and had been rolled up in long bandages; in the same breath she declared they were so painful she could not have them touched. The illness she thought arose from having caught cold accompanied by diarrhea. She complained of stiffness and severe pain in the muscles of the neck, of pain about the heart, and of excessive perspirations at night. But when her legs and feet were examined they were smooth and white. There were no swellings about the neck which she said was so painful. Although her face flushed occasionally, it was due to mental excitement, not to fever. She admitted she was nervous, and said if anybody made her laugh she could not stop, and the laugh soon changed into weeping and screaming followed by deep depression of spirits.

The beginning of this young woman's illness dated from a sad and unexpected bereavement. She visited her parents and found her father in his coffin, although



she had not heard of his illness. The shock utterly upset her nerves, and she soon began to lose strength, became subject to fits of palpitation of the heart, and after a time the hysterical attacks were developed. She related the history of her case with simplicity and candor. She undoubtedly believed her legs had been red and swelled two days before, but there were good reasons to doubt it because no traces of these conditions could be discovered soon afterward. She also complained bitterly of pain in various parts of the body; but if the alleged painful places were handled while her attention was directed elsewhere, no increase of suffering was caused.

A hysterical woman may laugh immoderately without cause or enjoyment, and weep bitterly without experiencing mental anguish.

*Case II.* A maiden who said she was thirty years of age, but looked older, had much difficulty in making a living by her own labor. Her health had declined because of hard work, and she began to suffer from what she called sinking turns. At these times she would lie on her bed for hours without moving, in a semi-conscious state; her pulse at these times was small, slow, and the respiration scarcely perceptible. Several benevolent ladies, believing her to be a worthy object of charity, were active in providing for her wants. She soon found that their sympathy and benefactions increased with the apparent increase of her sufferings: therefore she magnified every misery she felt, and no doubt related some she never experienced. She complained of debility, of severe pains in her head and various parts of the body, of obstinate constipation, of symptoms of grave uterine disease with suppression of



the menses, and one day she stated that more than a pailful of clear water had escaped from the vagina.

*Case III.* The patient was a vigorous and very beautiful young woman, apparently in the severest part of a hysterical attack. Her face was flushed and pale by turns; her pulse and respiration were natural, and we felt quite sure she was not so unconscious as she seemed to be. She frequently had attacks of the same character. Before resorting to active treatment, we decided to try the effect of a mental impression. We observed she had a magnificent head of hair, and said to a lady who was standing at the bedside—Get a pair of scissors; we shall cut off her hair close to the scalp, and apply a blister. The effect was like magic. She instantly recovered enough to protest energetically against the proposed treatment. The use of cold water poured on her head, with stimulating remedies internally, quickly completed the cure, at least for that time.

The foregoing are fair examples of that class of hysterical women who magnify their ailments from mixed motives. Their nervous system being irritable, a small amount of discomfort causes much real suffering, leading them to think the disorder under which they labor is really of a very grave character. They are occasionally possessed by a morbid desire to excite interest and sympathy. Much tact and experience are required in examining these cases to separate the real from the imaginary. The sufferer may be deceived herself; in other cases much ingenuity and perseverance are evinced by these patients in deceiving both friends and physicians. One of the chief difficulties in the diagnosis and treatment of hysterical cases consists in the



fact that their ailments are not at all imaginary. In women possessing the hysterical temperament, hysteria enters as a disturbing element into many real disorders. The following are examples:

*Case IV.* A married lady who became very much debilitated from nursing her child too long was attacked by convulsive fits, by which her legs and arms were drawn up violently; her voice disappeared at the same time; but as she never lost consciousness, she could not be epileptic. She had the appealing hysterical eye, the dilated pupil and the full upper lip, so characteristic of hysterical women.

*Case V.* A young widow, about thirty years of age, whose husband had died two years before of pulmonary consumption, by which he had been laid up more than three years, during which time she had worn herself out nursing him. She had never been very strong, and lately had grown very weak, but no positive disease was apparent. Her voice had almost disappeared, and she could speak only in whispers. A cough developed afterward, and she began to spit up blood. Whenever she attempted to whisper a fit of coughing was excited without any expectoration. She felt sure she was becoming consumptive, but a careful examination of her lungs and heart showed they were quite sound. Although this patient was really far from being well, yet all the prominent symptoms were due to hysteria, as was finally proved by the occurrence of a sort of paralysis never observed in any other affection; by the puffy eyelids, dilated pupil, and finally and conclusively, because she got well quickly by means of anti-hysterical and tonic treatment, mainly of the former sort.



*Case VI.* A young mother who had lately given birth to her second child recovered from her confinement very imperfectly. An attempt to suckle her infant, with broken rest, still farther increased her previous debility. She now began to suffer from pain in the pit of the stomach, which was credited to indigestion, a lump in her throat, headaches, ringing in the ears, flatulence, irregular chills, yawning, copious flow of clear urine, appeared one after another. She became despondent and nervous. She refused to get out of bed, saying she was too weak to do so, although she had sufficient strength to get up. If spoken to, she would look wildly at the individual addressing her. Several times she offered to lay violent hands on her mother, who tried to prevent her getting out of bed. Several times she rushed into the garden in her night-clothes, where she fell to the ground in a semi-conscious condition. The foregoing is a good example of a mild form of hysteria, gradually assuming a graver type in which convulsive motions, accompanied by more or less complete insensibility, and occasionally by hysterical delirium, may be observed.

*Case VII.* A young woman who was at service went home to visit her parents. When she arrived there she found her father, in a drunken fury, smashing the furniture and beating her mother. In doing what she could to protect the old lady and pacify the furious man, she became greatly excited and exhausted. After returning to her employer's house she complained of feeling very weak, lay down on her bed, and apparently fell into a deep fainting fit. We saw her shortly afterward, and revived her by pouring cold water on her head. When partly aroused by the application she



tossed about violently, rolling from side to side. After continuing these convulsive motions for a short time, she became quiet, without regaining complete consciousness. As she lay in this condition, if any bystander started a tune or song, comic or sentimental, she would instantly take up the strain and sing it through correctly.

*Case VIII.* A very vigorous young woman, who nevertheless, had the hysterical cast of countenance unmistakably, to the great surprise and regret of her friends, became a mother illegitimately. In consequence of this mishap she became despondent, and her health failed. We saw her after she had fallen on the floor apparently unconscious; she had been lifted on her bed, where she lay quietly. She resisted vigorously any attempt at treatment, and tossed herself about in all directions, manifesting a surprising degree of strength. Under the measures we used the convulsive motions gradually ceased, but they were succeeded by loud weeping.

It is important to distinguish hysterical convulsions from epilepsy. In the former we do not observe the total abolition of consciousness, the suddenness of the attack, the foaming saliva, the biting of the tongue, nor the interference with respiration so characteristic of the latter disorder.

Attacks of this character occasion great alarm both to the friends and the physician, if the latter fails to appreciate the comparatively harmless nature of the disorder. Attacks of hysterical coma have been mistaken for apoplexy; but in the latter disease the respiration is often snoring, one side of the body is often paralyzed, the pupils do not respond readily to



light, if at all, and persons who suffer from apoplexy are almost always older than hysterical subjects.

The disorder under discussion arises from a morbid condition of the nervous system, especially in its relations with the will. An important element in all these cases is a notable lack of will-power. The various forms of hysteria, although presenting an almost endless list of symptoms and manifestations which might induce the observer to conclude that he is studying several distinct disorders, are proved to be but different forms of the same affection, by the invariable occurrence of certain symptoms which are well known to be characteristic of the hysterical condition.

This disease may occur at any time of life, but the great majority affected are between the ages of fifteen and thirty years : hysteria being rarely developed before puberty, or after the menopause. It commonly affects women, but very remarkable instances have been observed in the sterner sex.

The symptoms manifested in the severer forms are very alarming to a person who lacks the knowledge to make a rapid and accurate diagnosis. When the disorder, presented by any nervous woman, is positively determined to be hysteria, a favorable result may be confidently predicted, no matter how alarming the symptoms seem to be. Still we must not forget that hysteria may be associated with affections of a serious character, and it is obviously very important not to confound the comparatively harmless disorder with some fatal affection.

The two following cases observed by Dr. Flint, and condensed from his report, are graphic illustrations of the extraordinary symptoms occasionally presented by hysterical patients.



*Case IX.* A German mechanic was admitted into the hospital in a state of apparent unconsciousness. On the morning after his admission he appeared to be in a quiet sleep, he could not be roused to any manifestation of consciousness. On raising his eyelids they remained open for some time, but he appeared to take no notice. Flies creeping over the face or even over the open eyes did not disturb him. The breathing was perfectly natural and regular. Drinks put into his mouth were retained there for some time and mostly escaped, a small portion only being swallowed. He lay motionless, not changing his position, and giving no manifestation of suffering. The cold douche was applied to the head for some time with no effect. On the second day he was in the same state, and had so remained. He swallowed automatically any liquid that was placed in his mouth. The vapor of ammonia applied to his nostrils made the mouth pucker and flushed his face, but called forth no manifestation of consciousness or effort to escape from the pungent inhalation. On the third day there was no material alteration. He remained apparently unconscious and nearly motionless; his eyes were for the most part open, but he seemed to take no notice; the eyes were fixed in one direction, and he seldom winked. Drink and nourishment put into his mouth were mostly lost. There had been no evacuation from his bowels or bladder since his admission. A quart of urine was drawn off by a catheter. The finger could be placed on his open eye without causing him to wink. For the first time he voluntarily changed his position in bed. On the fourth day there was marked improvement. The eyes were open and denoted intelligence, but he did not speak nor appear to give heed to



questions. He made slight and ineffectual efforts to protrude his tongue when requested. He took nourishment freely and with apparent relish: on this evening he had a paroxysm of violent weeping. On the fifth day he was not so well; he refused nourishment, and lay with his eyes open, and appeared to take no notice. On the sixth day there was no material change. Croton oil together with brandy were forcibly administered, the patient resisting, holding the liquids in his mouth, but finally swallowing them: four drops of croton oil had been given without effect. On the seventh day there was no material improvement. A hammer dipped in boiling water was applied to his back. He bore the heated iron for some time without manifesting pain; but on continuing the application, and stating that it was intended to apply it over the whole body, he began to make vigorous resistance, and at length protruded his tongue when requested, and took brandy and water freely. On the eighth day he was much better; he took notice, drank without difficulty, and manifested more intelligence. On the ninth day the improvement continued; he took, however, but little notice, and replied to questions in a feeble whisper. On the eleventh day he was made to sit up; without any effort on his part he was placed in a chair. He remained sitting in one position, with his eyes fixed in one direction, his lips slightly separated; he protruded his tongue when requested, but replied to no questions. The expression of countenance was that of the deepest dejection. Nourishment was given with difficulty. On the thirteenth day there was marked change; he took notice, greeted the doctor with a smile, and offered his hand. He walked of his own accord, but on the fourteenth day he



again became indifferent, the eyes fixed in the same direction, and he refused nourishment ; he became almost as bad as on any former day. The application of a hammer heated in boiling water was again employed. The operation caused writhings and exclamations of pain, and on discontinuing it he took nourishment as directed. On the eighteenth day there was improvement : he talked and walked about of his own accord. On the nineteenth day he again relapsed into silence, with an expression of distraction and reluctance to take food. The application of the heated hammer on this, as on former occasions, did him good. On the twentieth day he was quite convalescent, and was discharged well at the end of three weeks. Nothing could be ascertained respecting the cause of the attack. He stated after his recovery that he recollected what had occurred during his illness. Consciousness was not lost, but the exercise of his faculties dependent on the cerebro-spinal system of nerves was, in a great measure, suspended. A morbid moral perverseness appeared to be an element in the case as in most cases of hysteria, but it was certain the patient was not a malingerer.

*Case X.* The patient was a married lady aged twenty-seven. She had been the mother of seven children. Three years before she had an attack of hysteria, followed by mental aberration for three weeks. She was in a state of mental abstraction, sitting in the same position, remaining motionless with the eyes closed. She made no reply to questions, and gave no indications of taking the least notice of persons or things around her ; she could not be made to open the eyes or mouth. When the eyelids were raised the eyeballs were rolled upward so that the whites of the eyes alone were visi-



ble. She resisted efforts to depress the lower jaw ; at times she opened her eyes and replied briefly to questions. She signified her desire for food and drink ; she took nearly as much food and drink as when in health. There appeared to be a suspension of the faculties of the mind except those connected with the instinctive wants. The condition existed with temporary periods of improvement for several weeks, when recovery was attained.

*Treatment.*—The relief of the hysterical paroxysm should first claim our attention. In treating convulsions due to hysteria we should remember that they are self-limited, and that if left altogether alone the paroxysms will pass away if care be taken to prevent the patient sustaining wounds and bruises. But they should always be arrested, as we have effective means at our command for this purpose. The prolonged application of a douche of cold water to the head rarely if ever fails. The patient's head should be held over a tub, and cold water poured on it continuously until the convulsions cease, and the patient admits being relieved. As consciousness is not completely abolished, and the convulsions depend on a delirious volition, the attendant should take care to state positively in the patient's hearing that the cold douche is to be used continuously until the patient be relieved, and that it must be repeated if the relief be not permanent. The moral effect obtained by such positive assurances has much to do in securing permanently successful results.

The patient's friends should be positively assured in her hearing that she is in no danger, and that she shall certainly recover. After the convulsions cease the use of prescription 205 for a week or two will be of decided service.



205 R. Elixir of the valerianate of ammonia. . . . . 16 ounces.

One tablespoonful three or four times a day.

If the patient be apparently unconscious, the cold douche, applied to the head as before directed, will almost invariably succeed in restoring complete consciousness.

When the cold douche cannot be conveniently used, prescription 206 is a remedy of very great value.

206 R. Tincture of lobelia. . . . . 2 drams.

Tincture of assafetida. . . . . 3 drams.

Tincture of aloes. . . . . 3 drams.

Tincture of valerian. . . . . 6 drams.

Molasses. . . . . 3 ounces.

Water, enough to make. . . . . 6 ounces.

One tablespoonful in three or four of water. If the first dose does not relieve the paroxysm, another may be given at the end of an hour.

Vomiting is sometimes an annoying symptom, and if it be present prevents the use of remedies by the mouth. Under such circumstances the following prescription should be used as directed :

207 R. Eclectic compound tincture of lobelia and cap-

sicum . . . . . 3 ounces.

One tablespoonful diluted with three or four tablespoonfuls of water to be used as an injection into the rectum.

After relieving the urgent symptoms observed during the attack the hysterical condition demands attention. The principles which should guide us in effecting radical cures of hysteria are concisely laid down by Doctor Chambers as follows :



1st. Hysteria is a disease of the mind and of the body also.

2nd. That in some cases the mental and in others the corporeal phenomena predominate.

3d. That the predominance of the one or the other must be our guide whether moral or physical agents are most required in the treatment.

4th. That one most important part of the treatment must be the teaching our patients to exert the will.

5th. That the organ that aids us most in our treatment of the body is the stomach, and on the proper regulation of this organ the success of that part of the treatment must depend.

If the digestion be slow and imperfect prescriptions 208 or 209 will be of decided service :

208 R.	Acetate of strychnia.....	1 grain.
	Sulphate of quinine.....	20 grains.
	Dilute sulphuric acid.....	20 drops.
	Glycerine .....	2 ounces.
	Water to make.....	4 ounces.

One small teaspoonful in water one hour after meals. The above is a very effective and safe remedy.

209 R.	Tincture of capsicum.....	$\frac{1}{2}$ ounce.
	Tincture of myrrh.....	1 ounce.

Ten to fifteen drops in water half an hour before meals.

The diet of these debilitated sufferers should be nutritious and digestible. Rich milk has a singularly good effect in many cases. The depressed condition of the patient's system produces a craving for stimulants in many cases. To gratify this abnormal longing patients have been known to drink eau de Cologne, spirits



of lavender, or aromatic spirits of ammonia. Therefore, if alcohol in any form be prescribed, it should be in limited quantities, and for a short specified time only; otherwise an uncontrollable craving for spirituous liquors may be quickly acquired. The measures adopted with a view to effect a cure must be directed to invigorate both mind and body if permanently valuable results are to be attained. After a considerable amount of improvement has been secured, a change of air and scene is often a most potent means of recovery. Nutritious and digestible food, exercise in the open air stopping short of fatigue, with abundant sleep, are very important. Agreeable companions and suitable mental occupation are useful in diverting the patient's attention from her own morbid sensations. Whatever causes that are known to be operative in individual cases should be carefully removed. The sufferer must be exhorted gently but firmly to use her will-power in resisting a tendency to yield to emotional disturbance. Her pride may sometimes be brought to the rescue by pointing out to her the somewhat discreditable nature of her disorder. In those deplorable cases in which the symptoms are willfully exaggerated in order to attract attention, excite sympathy, or secure money, the more disagreeable the treatment is the more rapidly will the cure be effected, provided the patient be given to understand it shall be administered until a cure be accomplished. The daily use of the cold douche, or the frequent application of the hammer heated in boiling water to the back, or by giving her large doses of some nauseous medicine frequently has a most beneficial effect. Prescription 210 is an excellent preparation, the good effects of which will be apparent both mentally



and physically. It is specially valuable in those cases in which the disorder affects mainly that unexplored region lying between mind and matter. Young women who are well physically, and who would recover very quickly if they were willing to exert their will effectively, promptly recover under its use :

210 R.	Tincture of lobelia.....	2 drams.
	Tincture of capsicum.....	3 drams.
	Spirits of turpentine.....	3 drams.
	Tincture of aloes.....	3 drams.
	Tincture of valerian.....	6 drams.
	Molasses .....	4 ounces.
	Water.....	2 ounces.

One tablespoonful in water four times a day. The dose may be diminished if a tablespoonful nauseates the patient. The above compound is so distasteful that the patient usually recovers rather than take the medicine.

In cases of hysterical headache the following prescription is very serviceable, especially when sluggishness of the bowels accompanies the nervous headache :

211 R.	Phosphate of zinc.....	20 grains.
	Dilute phosphoric acid.....	1 dram.
	Tincture cinchona bark.....	6 drams.
	Glycerine. ....	1 ounce.
	Water .....	3 ounces.

Dessert-spoonful in half a wine glass of water after meals.

The foregoing measures, when diligently employed, may be relied on, not only to relieve very violent paroxysms of hysteria, but to effect a cure in due time.



## CATALEPSY.

This singular disease is very rare, but does occasionally occur. Both the mental and physical condition of these sufferers resembles hysteria in many respects, particularly the sort characterized by semi-unconsciousness, accompanied in cataleptic patients by a peculiar rigidity of the muscles. The sufferer's body and limbs remain in whatever position they may be placed. Symptoms that cannot be distinguished from mild hysteria frequently precede an attack of catalepsy; but the disease sometimes appears without any premonition. In some cases the limbs are so rigid that considerable force must be used to alter their position. The patient's body almost always lies motionless throughout the whole attack, although it lasts for days. The circulation may be regular, the breathing natural, and if food be taken, the digestive processes may go on almost as in health. Catalepsy bears a curious resemblance to the condition in which persons are thrown by mesmerism. Like hysteria, the disorder occurs in paroxysms, which often differ widely in duration and frequency. Mental depression, melancholy, exhausting intellectual labor, violent passions, such as hatred, jealousy, love, fright, domestic affliction, reverses of fortune, seem to favor its development. If the cataleptic paroxysm be prolonged, food must be given forcibly. The patient's body must be kept warm. Abundant friction with the hand, by a vigorous manipulator, is very useful. Other measures adapted to the cure of these patients are the same as those for the severer cases of hysteria. There are good reasons to believe that cataleptic patients have been buried alive, their friends believing them to be dead. Great caution in this respect is requisite in such cases.



## THE DANCE OF SAINT VITUS—CHOREA.

Chorea is a disorder of the nervous system, and is chiefly manifested by irregular contractions of more or less of the voluntary muscles, independent of the patient's will. At first the disorder is commonly confined to a small group of muscles, and afterwards spreads more or less extensively to other parts of the body. The unceasing motions of the affected muscles often produces grimaces and contortions, which would be ludicrous, if they were not serious. The incessant and uncontrollable action of the muscles often causes distressing fatigue; the patient may be unable to feed herself, speak intelligently, or to walk. The motions are fortunately almost invariably suspended during sleep, otherwise the disease would be rapidly fatal. It is not very infrequently observed during pregnancy, and forms then a very serious complication. Chorea commonly occurs in young married women of delicate organization in the first pregnancy, who have been subject to this disease or other nervous disorders before marriage. In such subjects the disorder is apt to return when the disturbing influence of gestation takes place. The disease presents a much more serious aspect during pregnancy. A very considerable proportion of all the recorded cases occurring during gestation have proved fatal, and even when recovery occurs, the patient's mind is much more apt to be weakened by the chorea of gestation than when it takes place in the non-pregnant condition. It has also a very powerful tendency to produce abortion with the death of the child. Indeed, when miscarriage occurs naturally, the choreic woman enjoys the best chance of recovery. The question of inducing premature labor may have to be con-



sidered, even in cases in which there is no natural tendency to miscarriage, in order to save the woman's reason, which will be almost certain to break down before the full term of gestation is completed under the disastrous influence of a severe and long-continued attack of chorea. Under no circumstances should this be attempted without the concurrence of at least two reputable physicians. After delivery the disease sometimes spontaneously disappears, and is in all cases much more amenable to treatment.

The general health of the patient must, first of all, receive attention. Constipation should not be permitted. Severe purging is to be avoided. The bowels should be rendered soluble by a suitable diet if possible. If laxative medicines be required, the following will be found to answer every purpose. Prescription 212 is a gentle, warm, cathartic cordial:

212 R. Compound tincture of rhubarb.....	1 ounce.
Compound tincture of gentian.....	$\frac{1}{2}$ ounce.
Aromatic spirits ammonia .....	2 drams.
Syrup of ginger.....	1 ounce.
Glycerine.....	1 ounce.
Water to make.....	6 ounces.

One tablespoonful when necessary. Two or three tablespoonfuls may be taken if the small dose be inadequate to secure the proper effect.

If the patient be pale, weak, bloodless, and without appetite, the following medicine may be given with good effect before beginning specific treatment. Under its use the quality of the blood and the muscular strength improve quickly:



213 R.	Tincture muriate of iron .....	3 drams.
	Sulphate of quinine.....	20 grains.
	Fowler's solution .....	30 drops.
	Glycerine.....	2 ounces.
	Water .....	2 ounces.

One small teaspoonful in water after meals.

A multitude of remedies have been used for the cure of chorea, all of which have been proved successful in some cases. But such is the peculiar character of the disease that it is impossible to predict what remedy is sure to be successful in any given case until the effect has been observed.

Prescriptions 214, 215, 216 and 217 are among the most effective remedies known to the profession :

214 R.	Fowler's solution.....	1½ drams.
	Bitter wine of iron.....	3 drams.
	Glycerine .....	2 ounces.
	Water.....	2 ounces.

One teaspoonful after meals. If the eyes become tender and suffused, or the face becomes puffy while taking the above mixture, it should be discontinued immediately.

215 R.	Fluid extract black cohosh.....	2 drams.
	Simple syrup.....	1 ounce.
	Glycerine.....	1 ounce.
	Water to make .....	4 ounces.

One teaspoonful one hour before meals.

If the medicine causes a tight feeling in the head, or headache, the dose should be diminished, or the remedy discontinued.

216 R.	Carbonate of iron.....	2 drams.
	White sugar.....	1 dram.

Triturate together in a mortar. Divide into 24 powders. Take one powder in a little syrup or sweetened water after meals.



217 R. Pulverized oxide of zinc . . . . . 1 dram.

Divide into 20 powders. One powder after each meal. If this remedy causes nausea, the dose should be diminished.

In many cases the movement-cure treatment proves very effective, either alone or used in connection with some of the above remedies. The cool shower-bath once a day has a remarkably beneficial effect in some of the severest cases.

#### PROMINENCE OF THE EYEBALLS.

This somewhat rare disease is confined almost entirely to women, although it has been observed in men. The most notable symptom is an undue protrusion of the eyeballs, giving the patient a ferocious expression. The eyes protrude in some cases so far as to prevent closure of the lids, so that the eyes are partially open during sleep.

Vision is not impaired, and the appearance of the eyes, aside from their prominence, is natural. The disease is not painful, although there is a certain amount of local distress connected with the disorder. The thyroid gland situated at the root of the neck, in front, is enlarged, and the action of the heart is louder, more forcible and frequent. These are the prominent symptoms. But sufferers from the disorder under consideration are often bloodless and weak, subject to mental depression, irritability of temper, sleeplessness, want of appetite, emaciation; hysteria, and suppression of the menses.

The disease is chronic, often continuing for years, but does not of itself tend to fatal results. When recovery



occurs the improvement is usually slow. The protrusion of the eyes always ceases after death, and even during life moderate pressure suffices to push the eyes back to their proper place in the sockets.

Remedies to tranquilize the tumultuous action of the heart are urgently required. Prescription 218 and 219 are very effective for this purpose, rarely failing to afford relief.

218 R. Fluid extract skullcap.....2 ounces.  
Tincture digitalis.....1 dram.  
Glycerine..... $\frac{1}{2}$  ounce.  
Water.....1 ounce.

One teaspoonful three or four times a day in a little water.

219 R. Tincture cereus Bonplandii.....2 $\frac{1}{2}$  drams.  
Glycerine. ....1 ounce.  
Water to make.....2 ounces.

One teaspoonful three times a day.

In the following prescription a remedy to quiet the violent action of the heart is combined with a general tonic. Excellent effects often attend its use.

220 R. Tincture chloride of iron.....3 drams.  
Acetate of strychnia.....1 grain.  
Tincture of digitalis.....3 drams.  
Glycerine.....2 ounces.  
Water to make.....6 ounces.

One teaspoonful after meals in water.

The patient should be relieved of all mental and bodily toil. Change of air and scene with recreation are very useful. The diet should be unstimulating, digestible and nutritious.



After substantial improvement has been secured by the means already indicated, the Swedish movement cure sometimes succeeds in overcoming all traces of the disease, although to those who are unacquainted with the scope and power of this mode of treatment it may seem to be inappropriate.



## PART II.

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### THE PUERPERAL STATE AND ITS DISORDERS.

PREGNANCY is that condition of the woman which exists from the moment of impregnation until parturition. As the result of gestation the feminine system undergoes numerous modifications, which in many cases result in disease. But the workings of Nature under special circumstances must not be regarded as being necessarily morbid. Although many women suffer various discomforts during pregnancy, these cannot be called diseases; nor can they be charged altogether to their physical condition, but are largely due to the highly artificial life led by civilized women. The fact is that this period is to many women a time of improved health.

Notable amelioration often occurs in the health of consumptive women after the occurrence of conception, the cough is modified or disappears completely, and they gain flesh and strength. The influence of gestation in restraining the progress of many other chronic diseases is well known. Still the progress of these disorders is usually only checked during gestation, and they resume their destructive course after parturition, in the great majority of cases.

*The virgin womb.*—The virgin uterus is pear-shaped, the small end being placed downward; it is flattened



from before backward, situated in the cavity of the pelvis, having the bladder in front and the rectum behind. It measures about three inches in length, two in breadth at the upper part, is about one inch from back to front, and it weighs from one ounce to one ounce and a half.

The walls of the uterus are from one quarter to three eighths of an inch in thickness. As a necessary consequence the uterine cavity is small in comparison to the external size, being capable of containing only about one teaspoonful of liquid.

All the physical organs of the young subject develop one after another just as they are needed. Some are complete at birth ; the heart, brain, lungs, stomach and kidneys are then or immediately after all in full working order, because without these life could not be maintained at all. Others undergo development after birth, of which the sexual organs and skeleton are notable examples. Although all the other female organs of generation are fully developed at puberty, the womb does not undergo complete development until conception has occurred once and pregnancy gone on to the full term.

#### CHANGES OCCURRING IN THE WOMB DURING GESTATION.

The material of which the virgin uterus is composed is so dense, and resembles other muscular structure so little that the older anatomists denied that it was muscular structure at all. But if we examine a womb that has once been pregnant its muscular texture is immediately apparent. The weight, size, and capacity of the womb is enormously increased during gestation both by the growth of the original muscular fibres and of many new ones.



The old physiologists believed that the material composing the pregnant womb at full term was not greater than in the virgin condition : they taught that the organ increased in size by expanding just as a rubber balloon expands when blown up by the inflating gas.

As pregnancy advances the womb rapidly loses its flattened pear shape, the body becoming nearly globular. From the twelfth to the twenty-fourth week the flat, triangular virgin cavity becomes more and more spherical ; during the remaining sixteen weeks of gestation the uterine cavity becomes egg-shaped ; so that at full term the womb measures outside about twelve inches long, nine broad, and eight from before backward.

These alterations in the shape and size of the uterus are necessarily attended by a change in its situation in the pelvis. During the first twelve weeks it remains in the true pelvis, and cannot be felt by placing the hand on the lower part of the abdomen, although by making deep pressure it may usually be recognized. The increased weight of the womb causes it to sink down during the first twelve weeks, and the neck may then be felt much lower in the pelvis than before impregnation took place. But the rapidly increasing size of the womb soon renders necessary its ascension into the abdomen. If it remains imprisoned in the pelvis by any displacement grave dangers are rapidly incurred. During the fourth month the growing womb can be readily felt at the lower part of the abdomen. If the walls of the abdomen have been relaxed by frequent gestations the upper heavy part of the uterus is apt to drop forward ; but in first pregnancies it rises more nearly to the perpendicular so that it will have reached the navel. About



the thirty-sixth or thirty-seventh week it has usually attained its highest altitude. Between this time and the end of gestation it falls downward and forward to prepare, as it were, for the impending struggle of labor. At the termination of pregnancy the uterus, Fallopian tubes, and its ligaments occupy the greater part of the abdominal cavity, the womb having displaced the digestive viscera to make room for its own development.

#### SIGNS AND SYMPTOMS OF PREGNANCY.

The growth of the gravid womb and the new being it contains are the essential phenomena of the pregnant state. Associated with these, however, and depending on their continuance, are a multitude of other manifestations known as the signs and symptoms of pregnancy. The influence of the pregnant condition is so powerfully and extensively felt in the female system that there is no function or organ that may not be affected thereby; therefore the symptoms that may arise during its progress are very numerous and of a complicated character. We shall consider them as briefly as may be consistent with a suitable presentation of the subject.

#### SUPPRESSION OF THE MENSES.

The menstrual discharge usually but not always disappears as soon as conception occurs; still it is not very uncommon to observe, during the early months of pregnancy, a periodical discharge of blood at the usual intervals. In a few cases this continues until the fifth or sixth month, and in rare instances until the end of pregnancy. Still more rarely are women known to have menstruated only during pregnancy, or did so for the first time after conception, or became pregnant without



ever having menstruated at all. These are similar to the conceptions that take place during nursing, the woman not having menstruated since her previous confinement.

The value of the suppression of the menses as a symptom of pregnancy is lessened by the fact that the monthly discharge is frequently stopped by various morbid influences, as cold or fatigue. In some cases the menses disappear for a time without any discoverable cause. Not unfrequently newly married women cease to menstruate for several months after marriage, although impregnation has not occurred. In view of these facts the suppression of the menses cannot be relied on as a sure sign of impregnation.

#### NAUSEA AND VOMITING.

There are very few women who do not suffer more or less from gastric disorder in consequence of conception. In some it occurs simultaneously with conception, and may continue until delivery ; usually, however, the difficulty is not manifested until toward the close of the first month, and ceases about the time of quickening, to return with increased severity toward the close of gestation. The morning sickness, suffered at the beginning of pregnancy, is purely sympathetic ; that occurring near the termination is due to pressure by the womb on the stomach. In neither case is the latter organ diseased.

#### USES OF MORNING SICKNESS.

The copious supply of blood that flows to the womb as soon as conception occurs to prepare it for the reception of the growing embryo causes an irritable condition



of the recently impregnated organ, exciting it to contract on and expel its contents. But the occurrence of nausea, especially if that be accompanied by vomiting, acts in many cases as an effectual counter-irritant, preventing miscarriages by rendering the womb more tolerant of its contents. This view is confirmed by the fact that women whose stomachs are never sympathetically disturbed by pregnancy are much more liable to miscarry than those who suffer moderately from morning sickness. As a rule, this symptom is most violent in women pregnant for the first time, but it happens not unfrequently that women who have suffered very little during one pregnancy from notable digestive disorder, may, on a subsequent occasion, undergo its miseries to the fullest extent. There are great differences in the degrees of distress to which the act of vomiting gives rise, some women emptying the stomach as easily as if they simply ejected the food from the mouth, while in others the retching is so violent as to lead us to wonder how abortion does not promptly occur. It is not a little remarkable to observe, even when the woman becomes emaciated from lack of nourishment due to almost incessant vomiting, the development of the infant goes on without interruption, and it is often as plump at birth as if the mother's stomach had been quite unaffected. In the worst cases the vomited matters are mixed with bile, the breath is fetid, and severe pain is suffered at the pit of the stomach.

Sometimes the disorder passes suddenly and completely away without treatment, but in other cases it continues until the woman is reduced almost to complete exhaustion, when Nature sometimes comes to her relief by the production of spontaneous abortion.



## TREATMENT OF MORNING SICKNESS.

As the influence of morning sickness on the progress of gestation is usually favorable, no attempt should be made to check the nausea so long as it is not excessive ; but when the gastric irritability continues without cessation, preventing the woman from taking enough food to properly nourish herself and her offspring, means should be employed to control it.

There is perhaps no disorder common to women for which so many remedies have been used as for the morning sickness of gestation. This arises from the fact that no amount of medical experience will enable a physician to predict the effect of any remedy. The medicines that are most frequently useful must be tried one after another until success be attained. In many cases the simplest remedies are effective, and should always be first tried. The closest attention must be paid to the condition of the bowels, as the removal of constipation often affords prompt, complete, and lasting relief from the most distressing nausea. An occasional dose of the citrate of magnesia, of some of the laxative mineral waters, or the following prescriptions will therefore prove very useful in such cases :

220 R. Phosphate of soda.....1 ounce.  
Ginger tea.....4 ounces.

Dissolve the soda in the tea while it is hot ; strain. Take one-half of the quantity at one dose ; if no laxative effect be apparent at the end of two or three hours, the other half may be taken with advantage.

But medicines of this sort must not be used by pregnant women too frequently ; disastrous effects are apt



to follow the frequent use of cathartic drugs for long periods. The bowels should be kept open preferably by laxative food ; oatmeal mush, cracked wheat, or graham bread should enter into the daily diet. Eating a dry, hard cracker or two on awaking, before lifting the head from the pillow, is sometimes an effectual remedy for morning sickness. In some cases cold food only is retained ; for others everything eaten must be served hot. If the nauseated woman complains of backache, a hot hip-bath will occasionally cure both the ache and the nausea. Milk and lime water, or simple barley water, sometimes settles an irritable and nauseated stomach, so that both the remedy itself and food are retained without difficulty. A belladonna plaster applied to the pit of the stomach is sometimes effectual. The following prescriptions may be successively tried, with the almost absolute certainty of finding some of them successful, either temporarily or permanently :

221 R. Salicine.....1 dram.  
 Glycerine.....1 ounce.  
 Water.....2 ounces.

Dissolve the medicine in the water, and add the glycerine. Mix the ingredients by shaking the bottle. One teaspoonful half an hour before eating.

222 R. Oxalate of cerium.....1 dram.  
 Sugar.....2 drams.

Triturate together in a mortar, and divide into 15 powders. Take one powder in a little water half an hour before eating.

223 R. Sugar of lead.....30 grains.  
 Dilute acetic acid..... 2 drams.  
 Water ..... 3 ounces.



One teaspoonful half an hour before eating. If this remedy does no good, when three or four doses have been taken, it will be useless to continue.

224 R. Chamomile flowers .....  $\frac{1}{2}$  ounce.  
 Whiskey..... 4 ounces.  
 Water.....12 ounces.

Macerate the flowers for seven days in the diluted whiskey, and strain. Take one teaspoonful before meals. This is also an excellent and safe remedy for improving the appetite.

225 R. Calumba root, in coarse powder..... 2 ounces.  
 Whiskey..... 4 ounces.  
 Water.....12 ounces.

Macerate the medicine in the diluted whiskey for seven days, shaking occasionally. Strain, and take one teaspoonful before meals.

226 R. Quassia wood chips.....  $\frac{1}{2}$  ounce.  
 Whiskey ..... 4 ounces.  
 Water.....12 ounces.

Macerate the chips in the diluted whiskey for seven days, shaking occasionally. Strain, and take one teaspoonful before meals.

227 R. Dilute prussic acid.....1 dram.  
 Simple syrup.....2 ounces.  
 Water.....1 ounce.

One teaspoonful before eating. Shake the bottle every time before measuring the dose, as the poisonous prussic acid is apt to float on the top, and too large a dose may be taken if the shaking be omitted, but with this precaution the remedy will be perfectly safe.



228 R. Subnitrate of bismuth.....1 dram.

Divide into 6 powders. Take one powder in a little water before eating.

229 R. Oxide of silver.....30 grains.

Powdered licorice root.....30 grains.

Glycerole of starch a sufficient quantity.

Make into 15 pills. Take one pill half an hour before eating.

#### DEPRAVED AND DISORDERED APPETITE.

Want of appetite, amounting in many cases to loathing of food, is not uncommon during gestation quite apart from the nausea usually attending that condition. It may often be relieved by the regulation of the bowels. For this purpose no preparations are more effectual than the following. One or at most two pills, made according to either the subjoined prescriptions, will produce a perfectly natural action of the bowels next morning without the least griping or other disagreeable effects :

230 R. Four-grain sugar-coated aloes and myrrh pills  
of the United States pharmacopœia.....24 pills.

One pill before retiring for the night.

231 R. Extract aloes.....30 grains.

Extract nux vomica..... 6 grains.

Extract henbane.....20 grains.

Powdered ipecacuanha ..... 1 grain.

Mix the ingredients thoroughly. Divide into twenty pills. One pill before retiring for the night. Change of air and tempting the patient's appetite with her favorite dishes often does good. The vegetable bitters, prescriptions 232, 233, 234, 235, and 236, are frequently



useful, but are of less value in those cases than in want of appetite from other causes :

- 232 R. Golden seal.....2 drams.  
       Beth root.....2 drams.  
       Cinnamon .....2 drams.

All the ingredients must be in coarse powder. Infuse the medicines in half a pint of boiling water for two hours, strain, and add two ounces of whiskey. Take one or two teaspoonfuls before meals.

- 233 R. Gentian root.....6 drams.  
       Bitter orange peel.....3 drams.  
       Cardamon seeds.....1 dram.  
       Whiskey.....8 ounces.

All the ingredients must be in coarse powder. Macerate the medicines in the whiskey for seven days, strain, and take one teaspoonful in water before meals.

- 234 R. Chiretta.....1 ounce.  
       Sassafras.....1½ dram.  
       Red santal wood.....1 dram.  
       Whiskey .....10 ounces.

All the ingredients must be in coarse powder. Macerate the medicines in the whiskey for seven days, strain, and take one teaspoonful before meals.

- 235 R. Calisaya bark in coarse powder.....1 ounce.  
       Catawba wine.....12 ounces.

Macerate the bark in the wine for seven days, shaking frequently. Strain, and take from one teaspoonful to one tablespoonful half an hour before meals.

- 236 R. Sulphate of quinine.....10 grains.  
       Tincture of nux vomica.....1 dram.  
       Dilute sulphuric acid.....10 drops.  
       Glycerine .....1 ounce.  
       Water, to make.....4 ounces.

One teaspoonful half an hour before meals.



In other cases the patient's desire for certain articles of diet is greatly increased, and she becomes passionately fond of and consumes them in large quantities, although before conception she may have regarded them with indifference or even dislike. Such desires should be gratified in moderation. An intense longing to eat indigestible substances as raw rice, dry starch, chalk, lime, soap, cinders, or slate pencils is not very uncommon. It is judicious to humor the tastes of pregnant women as far as possible ; but when the coveted articles are prejudicial to health, particularly if they are utterly indigestible, they must be denied the patient by forcible means if necessary.

If a married lady in good health suddenly exhibits these morbid tastes, it is highly probable that pregnancy has occurred.

*Salivation.*—A profuse flow of saliva is occasionally observed during gestation. It is commonly confined to the early months, but sometimes continues during the whole period from conception to parturition. In some cases the amount of saliva discharged is enormous, amounting to several quarts during twenty-four hours, causing the sufferer very great distress. One case has been reported in which the lady sat all day long with a basin under her mouth to receive the thin, watery fluid that poured from the salivary glands. When large quantities of saliva are secreted for prolonged periods, profound if not dangerous debility may be caused. The salivation of pregnancy is a nervous disorder, and is the result of the intimate nervous sympathy existing between the sexual organs and the salivary glands in both sexes.

In the disease known as mumps, in which the largest of the salivary glands becomes the seat of inflammation,



it is quite common, after a few days, to observe the testes of the male and the breasts of the female become enlarged and painful. As soon as the enlargement occurs, the tumefaction of the parotid gland subsides. Astringent gargles, prepared according to the following prescriptions, are often useful :

237 R. Tannic acid.....20 grains.  
Glycerine..... 2 ounces.

Dissolve the tannin in the glycerine. One teaspoonful may be diluted with one or two tablespoonfuls of water, and used as a gargle several times a day.

238 R. Sulphate of iron.....32 grains.  
Water ..... 8 ounces.

Dissolve the iron in the water, and use one or two tablespoonfuls as a gargle several times a day.

239 R. Geddes' extract of hemlock bark..... $\frac{1}{2}$  ounce.  
Glycerine.....2 ounces.  
Warm water to make.....1 pint.

One or two tablespoonfuls to be used as a gargle as often as may be necessary to check the discharge of saliva.

240 R. Chlorate of potash.....1 dram.  
Tincture chloride of iron.....3 drams.  
Glycerine.....1 ounce.  
Water to make.....6 ounces.

Dissolve the chlorate of potash in the water, add the other ingredients.

One or two teaspoonfuls may be added to a tablespoonful or two of water, and used as a gargle.

In some cases the best results are secured by making counter irritation over the salivary glands, mainly the parotid, by painting the skin with the following prescription :



241 R. Iodine.....	15 grains.
Iodide of potash.....	15 grains.
Alcohol.....	1 ounce.

Dissolve the ingredients in the alcohol, and apply the solution to the skin daily until it becomes tender. A blister over the affected glands is sometimes successful after other means have failed.

*Changes in the Breasts.*—As a rule the breasts, like the uterus, become the center of an afflux of fluids soon after impregnation, that produces certain changes in them by which they are gradually fitted to discharge the important duty devolving on them at the termination of pregnancy. The earliest indications observed in the breasts that conception has occurred are a sense of weight, sometimes amounting to considerable uneasiness, or even actual pain.

The breasts are enlarged, firmer, and are more movable. Large blue veins are plainly visible coursing over the surface, particularly in women of a blonde complexion.

Toward the close of pregnancy the distension of the breasts sometimes becomes so great that the surface of the skin opens, causing silvery white lines to appear radiating from the nipple toward the circumference. Milk in the breasts is commonly regarded as an important evidence of gestation, but while it usually accompanies this condition, it is also frequently observed in many other conditions with which pregnancy has nothing to do. Many cases have occurred of young women who have never been pregnant, and of old women long past the child-bearing period, who by persistently applying a young child to the breasts, have quickly developed into excellent wet nurses.



*The Areola.*—The nipple is surrounded by a circle, the surface of which is composed of tissue intermediate between skin and mucous membrane. In the virgin state its color is of a delicate pink, being always darker in brunettes. A number of small slightly elevated glands are scattered around the nipples. If the latter structures be examined about the ninth week of gestation, they will be seen to have increased in size, and to have become more erect. About the same time or soon after, the color of the areola darkens and becomes more moist, its diameter increases, and the follicles scattered over its surface become more prominent.

This alteration of color occurs in all cases of pregnancy, but it is much more marked in women of dark complexions; in brunettes the areola becomes in some cases almost or quite black. About the end of the fifth month whitish spots are seen on the surface of the areola, which look as if the color had been discharged by some liquid having been spattered thereon. When the areola presents the above peculiar appearance it may be considered a sure sign of pregnancy.

The deposit of coloring matter is not confined to the areola. A dark line extending up the middle of the abdomen, expanding into a circle of the same hue surrounding the navel is quite common. In rare cases the whole surface of the body is perceptibly darkened during the first pregnancy. These patches partially fade, but do not entirely disappear after delivery; they are therefore of some value in determining the previous existence of pregnancy. In very rare instances a brownish discoloration of the skin all over the body has been developed during gestation.

But in every recorded case this general deepening of



color completely disappeared within a few weeks after delivery.

#### THE CONDITION OF THE ABDOMEN.

The popular idea that the abdomen progressively increases in size after conception is an error. The increased weight of the pregnant womb causes it to sink lower down during the first two months. This fact gives rise to the earliest change in the contour of the abdomen, which consists not in an enlargement, as might be expected, but in a slight flattening about its lower part. Actual enlargement of the abdomen begins about the fourteenth week, and continues to increase until near the end of gestation.

Cessation of the menses with abdominal enlargement is, to an expectant mother, a conclusive proof of conception. But there are several grave disorders of which these are prominent symptoms; and it not unfrequently falls to the lot of the physician to dispel expectant mothers' fondly cherished delusions. Important changes take place during the progress of gestation in the appearance of the navel. During the first three months it is usually a little deeper than before conception; at the end of this time it usually regains its original appearance. About the fourth month it becomes shallower than previous to conception, and from this time its depth steadily diminishes until, about the completion of the seventh month, it is level with the surface of the abdomen.

The pressure of the gravid uterus in the remaining two months of gestation causes the navel to protrude from the surface like a large nipple. This is a constant accompaniment of pregnancy; but as it is also caused



by dropsy and large abdominal tumors, it cannot be trusted exclusively as a sign of pregnancy. After the gravid uterus has increased to a certain size it necessarily presses on the pelvic blood-vessels, impeding to some extent the return of the venous blood, and causes in many cases of pregnancy, a purplish blue color of the mucous membrane of the vulva and vagina.

The activity of the pelvic circulation during gestation causes the arteries of the part to throb with unusual force.

Both of these signs are of great value in determining the existence of pregnancy.

#### CHANGES IN THE NECK OF THE WOMB.

The opening in the neck of the virgin womb will scarcely admit a delicate silver probe; but at child-birth it enlarges so as to give passage to the child, whose head usually measures from twelve to fourteen inches in circumference. There is probably no other material capable of such immense distension, not even the finest quality of vulcanized rubber. To enable the neck of the uterus to undergo this distension without laceration very great changes must gradually occur in this part. The substance composing the virgin uterus is as dense as that of the gums, but at the end of the first month the uterine neck begins to soften, feeling as if it were covered by short-napped but very soft velvet. Toward the end of the third month or at the beginning of the fourth the softening has extended upward nearly one quarter of an inch, and the end of the neck imparts to the finger the sensation of a bag filled with jelly. Month after month the softening process goes on slowly, until at term, the whole neck has become so soft



that it feels like a bag distended with water, and is recognized with difficulty. This wonderful change prepares the neck of the womb to undergo the immense distension to which it is subjected at parturition without destructive laceration.

The opening into the virgin uterus is a small dimple in the center of the neck which is the beginning of the fusiform opening into the body of the womb. After parturition at full term it becomes a slit extending from side to side about half an inch in length.

#### QUICKENING.

This term indicates the time at which, through the recognized motions of her child, the mother becomes aware she carries within her womb a living being. The old physicians believed that previous to this period the foetus was an inanimate mass incapable of independent motion, and, at the moment of quickening, vitality was for the first time imparted to it. Later physiologists have taught that the ascent of the uterus from the pelvis into the abdomen gave rise to the sensation of quickening. At the present time every woman knows that it is caused by the actual movements of the living child, which are for the first time recognized by her. This does not mark the period at which the first feeble motions have occurred, because quickening is seldom perceived by the mother before the sixteenth week : whereas, in abortions taking place much earlier, the embryo is seen to be capable of vigorous muscular movements. Slight motions can be felt by the skilled physician before the mother may be fully satisfied she is really pregnant. The time at which quickening occurs most frequently, may be roughly stated to be



when gestation is about half over. As a rule, the motions are very faint at first, but become stronger as the foetal strength develops.

Toward the close of gestation the motions due to the quick bending and partial straightening of the child's legs often cause the mother no little inconvenience or perhaps actual pain. The slow passage of the foetal knees or feet, or their steady pressure on the inside of the uterine wall, often causes her so much pain that she relieves herself by instinctively pushing the part away.

Genuine quickening is a most important and conclusive indication of pregnancy, both to the mother and her physician.

But the motions are sometimes so closely simulated by rapid movements of gas in the intestines, irregular contractions of the muscles of the abdominal walls, that both experienced medical men, and women who have repeatedly been mothers, are deceived. This indication must therefore be supported by other signs to be accepted as an infallible proof of pregnancy.

#### PULSATION OF THE FŒTAL HEART.

About sixty years ago, Dr. Mayer, of Geneva, Switzerland, discovered that the sounds of the foetal heart could be heard through the walls of the mother's abdomen. The period at which these sounds can be detected varies from the third to the fifth month of gestation. The pulsations of the foetal heart are very rapid, averaging from one hundred and thirty to one hundred and sixty per minute: while those of the mother's vary from seventy to eighty in the same time. This dissimilarity is of great value in forming a diagnosis, and enables the physician to detect the foetal cardiac sounds



with greater certainty. By this means the sex of children may often be determined before birth, from the fact that the pulsations of the hearts of female children average about fourteen more per minute than those of males. The area over which the sounds are heard is always small, and varies with the position of the child in the womb. They are most frequently detected in the left groin, and, when positively heard, furnish the surest obtainable evidence that the uterus contains a living child. By careful examination the existence of a twin pregnancy may also be determined, with much certainty, by the distinct detection of the sounds of two foetal hearts, each pulsating in different parts of the mother's abdomen. Under these circumstances the sounds of one heart will usually be heard low down and to the left, the other high up and to the right. There are other methods of investigating the existence of a supposed pregnancy, but they are available only to the skilled physician. Therefore, we forbear encumbering a popular work with unnecessary technical details.

#### DIFFERENT KINDS OF PREGNANCY.

The fecundation of the ovum usually takes place before or about the time it leaves the ovary. It is then grasped by the bell-shaped Fallopian tube and conveyed to the womb for farther development. When all this occurs in natural order it constitutes a genuine uterine pregnancy. Sometimes, however, the ovum remains in the ovary after fecundation and undergoes development to a certain point in that organ. When the ovum does so, it gives rise to an ovarian pregnancy.

When the Fallopian tubes fail to grasp the ovum and convey it to the uterus, it necessarily drops into the



abdominal cavity and attaches itself to some part of the peritoneum : when development takes place there, it is known as abdominal pregnancy. If the fecundated egg enters the Fallopian tube through which it should pass to the uterus, but stops on the way, attaching itself to some part of the tube and begins to grow, it gives rise to tubal pregnancy. When the impregnated egg reaches the womb, but in some mysterious way embeds itself in the thickness of the uterine walls, interstitial pregnancy is the result.

In all these different kinds of unnatural gestation, occurring outside the womb, the development of the embryo goes on in very much the same manner as if it were located in the womb. The foetus becomes enclosed in a species of cyst, developed by the part to which the ovum is attached, as well as in the usual foetal membranes. Wherever the ovum may attach itself, the blood-vessels in the vicinity become greatly enlarged very quickly, in order to furnish nutriment for the growth of the embryo, in the same manner that the uterine vessels increase in size when it is located in the womb. During the progress of all these varieties of extra-uterine pregnancy the womb slightly increases in size, and its lining membrane becomes softened and thickened from sympathy. It is comparatively rare that any of these varieties of gestation reaches the full time, although cases have been known to do so. In a few recorded cases the product of conception dies after reaching a certain stage of development: it then becomes dried, shrivelled, or mummified; in others it is converted into a fatty substance called adipocere, or into a material of stony hardness. Under these circumstances it may remain in the mother's body for many



years. In normal pregnancy the womb readily increases in size to accommodate the growing embryo; but the cysts enclosing it in these abnormal forms of gestation are much less capable of expansion; therefore, they almost invariably rupture, causing internal hemorrhage of a most dangerous or even fatal character. If the unfortunate patient does not promptly perish from loss of blood, she is exposed to the grave danger of peritonitis, which is extremely apt to follow rupture of the cyst and the pouring of its contents into the peritoneum.

*Causes.*—Adhesions of the pelvic peritoneum, by which the anatomical relations of the internal generative organs are altered, may undoubtedly cause either sterility or some forms of abnormal pregnancy. These results are specially liable to happen if the free end of the Fallopian tube be forcibly detained away from the ovary by being glued to some distant part. Examination of the bodies of women who have died of this disorder does not throw much light on the causes of extra-uterine pregnancy, as the relations of the parts are so distorted by the abnormal gestation that their condition at the time of fecundation cannot be even approximately determined. If the ovary were enclosed in a shut sack communicating with the uterus by a tube, the chances of the occurrence of gestation other than uterine would apparently be diminished; but as the ripe egg appears on the slippery surface of the ovary, having nothing, so far as we can see, to prevent it being shaken off; to take its chances of being grasped by the floating end of the Fallopian tube, we are surprised at the apparent imperfection of the means provided by Nature to attain her ends in this instance and to wonder that pregnancy outside the uterus occurs so rarely.



*Symptoms.*—The symptoms of these unusual forms of pregnancy are at first by no means well marked. If there be anything to attract the woman's attention at all it is very likely to be the ordinary trifling disturbances which often attend normal pregnancy during the first few weeks. She may otherwise enjoy perfect health until the advance of the disorder develops its peculiar symptoms.

The menses may or may not be suppressed; they are far less likely to be interfered with than in uterine gestation. The regular menstrual discharge is sometimes replaced by irregular uterine hemorrhages. Natural gestation is not necessarily accompanied by any pain, but all the abnormal pregnancies under consideration are characterized by intermittent or constant pains, often of a very severe character, attended by profound prostration, pallor, cold, clammy perspirations, feeble, flickering pulse, and sometimes fainting. These symptoms are generally associated with tenderness of the abdomen. After a few hours the pain and other symptoms diminish or disappear entirely, to recur again with all or more than their former severity, until something occurs to put an end to the whole process.

Uterine hemorrhages of variable quantity precede or accompany the pains. If with these symptoms the lining membrane of the womb be exfoliated, either in whole or in shreds, there need be little doubt concerning the diagnosis. If the development of the foetus continues until the sounds of its heart can be heard, the question will then be conclusively settled, if not before.

*Treatment.*—It is not easy, and may be quite impossible, even for an accomplished physician to ascertain positively, in cases of extra-uterine gestation, what is



the matter during the first few weeks. The treatment must, therefore, be directed against symptoms whose causes cannot be determined accurately.

The bowels should be kept soluble by some mineral water, or by the following gentle but effective laxative :

242 R.	Confection of senna.....	2 ounces.
	Powdered jalap.....	1 dram.
	Cream of tartar.....	2 drams.
	Powdered ginger.....	1½ drams.
	Simple syrup enough to make all the ingredients into a soft mass.	

One or two teaspoonfuls may be taken in a glass of water before retiring for the night.

No straining at stool by patients suffering from this disorder should be permitted. Rest in bed is an important consideration. Attacks of pain may be overcome by warm fomentations, freely sprinkled with laudanum, or the following suppository may be used with good effects :

243 R.	Sulphate of morphia.....	2 grains.
	Solid extract belladonna.....	1 grain.
	Powdered licorice root.....	60 grains.
	Glycerole of starch a sufficient quantity.	

Mix the ingredients, and divide into 8 suppositories. One may be placed in the rectum when pain is present.

Beyond these simple means, the services of a skillful surgeon are required to conduct the treatment in all cases of suspected extra-uterine gestation.





Fig. 29.

FIG. 29. Depicts the development of the maternal abdomen at the conclusion of the full term of gestation, and the position assumed by the child in the womb, in about seventy-five per cent. of all cases.





Fig. 30.

FIG. 30 Is an accurate engraving showing the manner in which the child is folded together immediately before birth, at the full term.



Fig. 31.

FIG. 31. Shows the relations usually sustained toward each other by twins. The head of one being at the fundus of the womb; that of the other, being directed toward the neck.

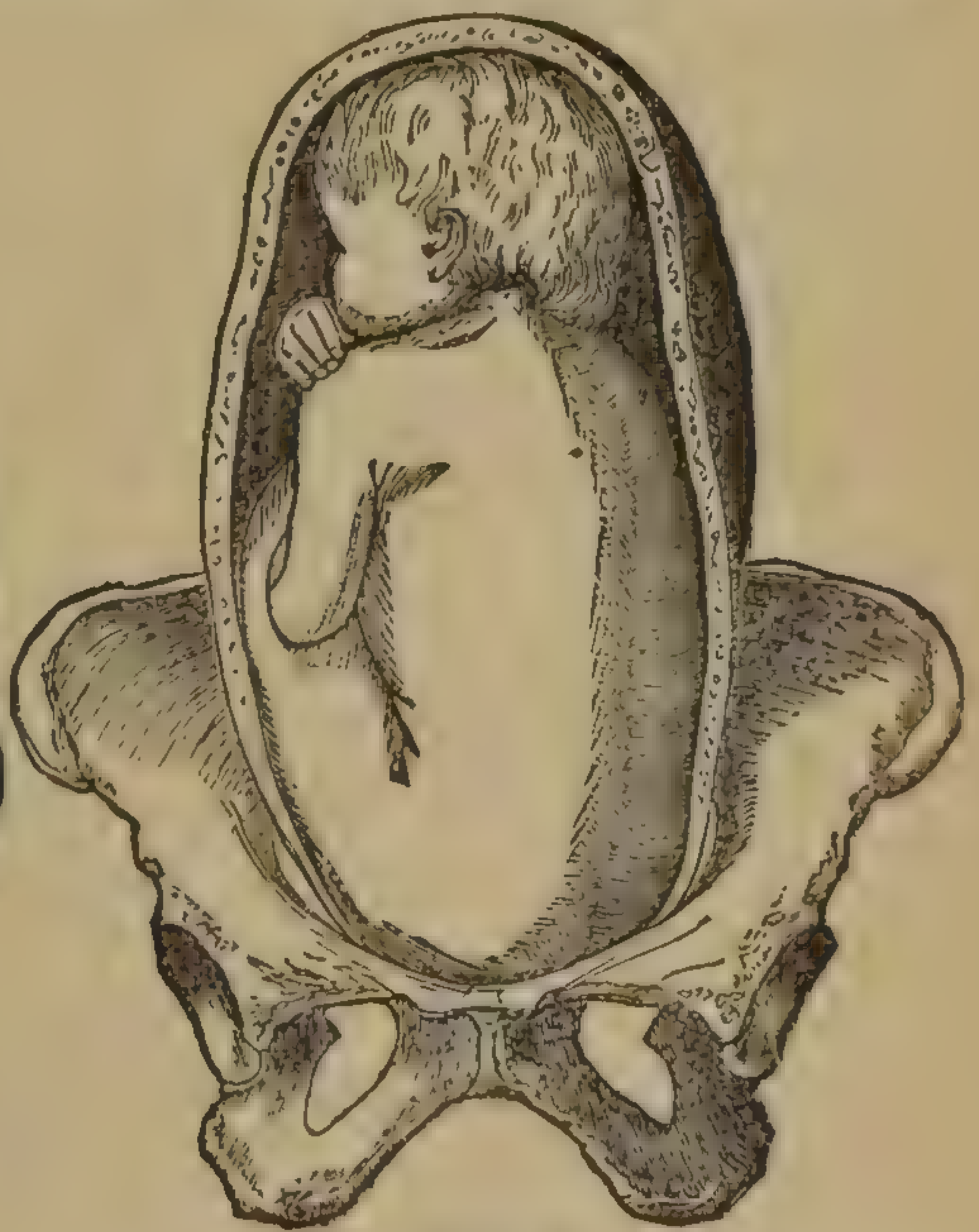


Fig. 32.

FIG. 32. Indicates the position of the child before birth, where the breech is born first.



## MULTIPLE PREGNANCY.

By this term is understood the development of two or more embryos in the mother's womb at the same time. Women occasionally give birth to three, four, or even five children at the same parturition. Twin births are quite common, occurring once in about seventy-five or eighty cases. Triplets are observed but once in about five thousand cases; and in more than one hundred and twenty-nine thousand births at Dublin, the record extending over many years, there was but one instance of a quadruple birth. Multiple conceptions occur because there are two or more ova ready for impregnation at the same time, or in rare cases because there may be two germs contained in the same ovum. It is sometimes possible to recognize twin pregnancies before delivery by the shape of the uterus, which is less globular and more enlarged toward the sides than in simple gestations. The motions due to quickening may usually be detected in different parts of the abdomen. If the abdominal walls be thin, the contour of the foetal bodies may sometimes be readily recognized by external manipulation. Toward the close of gestation the distension of the abdomen is greater than in single pregnancies. But the most conclusive proof is the detection of the sounds of two foetal hearts in different parts of the mother's abdomen, as before intimated. In cases of multiple pregnancy the development of the children is rarely equal; in some cases the growth of one is completely arrested, and one foetus dies, while the other goes on to complete development. If the dead foetus be retained it does not undergo putrefaction, as there is no access of air. It often becomes hard, withered, and mummified, and in this condition



it appears with the mature child at the time of labor. In other cases the uterus resents the presence of the dead foetus; and while endeavoring to expel it, the whole contents of the uterus are discharged, causing the death of the living foetus, if the latter be not adequately developed to maintain an independent existence. Abortions are more apt to occur during the course of multiple than in simple pregnancies, a result probably due to the greater distension of the uterus, which excites it to energetic contractions at an earlier period. As a rule, all the children of multiple gestations are born in the course of the same labor, and sometimes without any cessation of uterine effort. But not very unfrequently there is a pause of twelve to forty-eight hours, and in very rare cases the interval extends to several weeks, or perhaps months, when the womb resumes energetic action, and goes on to complete its work in a perfectly natural manner.

#### DURATION OF PREGNANCY.

There are obviously very great difficulties in ascertaining exactly the duration of pregnancy in the human species. As the same obstacles do not present themselves in determining this question in the lower animals, experiments have been conducted with a view to ascertain the duration of gestation in the cases of a considerable number of cows and mares. It was found that out of one hundred and forty cows the earliest calved on the two hundred and forty-first day, and the latest on the three hundred and eighth day. Of one hundred and two mares, the earliest foaled on the three hundred and eleventh day, and the latest on the three hundred and ninety-fourth day. Gestation is slightly more protracted



in the case of the former animal, and considerably more so in the latter, than in women. The point sought to be determined by these experiments was not so much the length of gestation in the human species, as whether there existed a variation in the duration of gestation in different individuals of the lower animals that would afford ground for believing that the duration of pregnancy in women was not invariable, but was subject to like fluctuations as regards time. The duration of pregnancy has been calculated in the cases of one hundred and fifty women, the date of whose conceptions was determined as nearly as possible with very great care, by which it was found that the earliest was taken in labor on the two hundred and fifty-fifth day, and the latest on the three hundred and sixth day, showing that the duration of gestation in different women is subject to considerable fluctuations. The Scotch law and the French code fix three hundred days as the utmost possible limit of gestation, and the Prussian at three hundred and one days. A large number of observations by independent observers inclines physiologists to believe that impregnation occurs in the majority of cases about one week after the cessation of the menstrual period. A ready method of reckoning founded on this belief is used generally both in Europe and the United States—yielding results not far from the truth. It consists in taking the date of the last menstrual period, computing three months back, and adding seven days.

For example, a woman has ceased to menstruate on the eighth of June; counting three months back or nine months forward brings us to the eighth of March; to this date add seven days: the fifteenth of March. This method of computation will be found in a large number



or cases to be within a few days of the time labor will commence. Many other rules might be cited, but the above is as simple and trustworthy as any.

#### THE CAUSES OF LABOR.

Many theories have been devised to account for the occurrence of labor at a definite time in all cases in which the natural course of pregnancy has been undisturbed. In ancient times the belief was entertained that the child itself effected its own release by opening the womb and rupturing the membranes in its efforts to reach the external world, in very much the same way that the chicken escapes from the egg in which it has been hatched. We are not now enquiring what expels the foetus from the womb. We know perfectly well this is accomplished by the contractile power of the womb and other auxiliary muscles. The question is, what influence excites these to action just at the right time and not sooner or later? One learned physiologist argues that there exists a natural antagonism between the muscular fibres of the body and the neck, and as soon as the neck has been opened by the progressive growth of the child, contractions are excited, which gradually increase in strength until they culminate in real labor pains. Another believes that the uterine contractions are due to the presence of carbonic acid in the blood. Sir James Simpson taught that labor comes on when the uterine contents are mature, just as ripe fruit falls from the tree. Others believe that the influence by which labor is excited springs from the ovaries. Until the present day the subject is involved in much mystery. The old physiologists who ascribed the advent of labor to the grace of God, were perhaps as near the truth as



modern scientists, who spin new theories without adequate basis.

#### THE IMPORTANCE OF INTERMITTENT UTERINE CONTRACTIONS DURING PARTURITION.

During labor a pain begins almost imperceptibly and quickly increases until the maximum intensity be reached, when it steadily diminishes until it ceases. The uterine contractions rise and fall like waves of the sea, leaving an interval of rest between each pain. When the womb contracts it is smaller than when it is at rest. As a necessary consequence the blood circulation between the mother and her unborn child is during contraction temporarily obstructed, preventing the child from receiving so much blood as before. But when the pain passes away the blood flows to the foetus, and it again respire freely. By the alternate contraction and relaxation of the womb during labor enough power is brought to bear on the child to bring it to the birth safely. While, if it were expelled by one long contraction, the suffering mother would be exhausted, and the child would have very little chance of being born alive, because of the failure of its respiration during the labor. Alternate uterine contractions and relaxations are also essential to enable the soft parts of the mother to bear the enormous dilatation to which they are subjected, without laceration.

#### FALSE PAINS.

Suffering from this cause is a common and annoying accompaniment of labor. They may be quite as painful as effective uterine contractions, but are spasmodic and variable in their character, and are not attended by





Fig. 33.

FIG. 33. Represents a general view of the child, and parts of the woman at the time of pregnancy. The left side of the pregnant womb is supposed to have been removed, and the intestines held back by a hook, showing the position usually occupied by the child immediately before birth.

In 80 per cent. of all cases, the back of the child is placed to the mother's left, and inclined forward, the face to the mother's right, looking backward; the legs and arms being folded on the body having the head downward, as shown in the cut.

The other 20 per cent, consist chiefly of cases in which, although the head is down in the natural way, the child's body occupies different relations to the mother—the face, for instance, looking to the mother's left side, inclined either backward or forward; the remainder being made up of more or less unnatural presentations in which the knees, feet, shoulders, arms, hands or breech descend first in the birth.







any evidence that progress is being made toward delivery. They are apt to harass the patient during the night and disappear during the day. True labor pains are felt first in the back and pass around to the front of the abdomen, as far down as the groin, recur at regular intervals, gradually increase in frequency and power with the protrusion from the uterus of the bag of waters. Labor cannot be successfully completed until the false pains are abolished. To effect this we must endeavor to ascertain the cause.

If they be due to a loaded condition of the bowels on account of long continued constipation during gestation, the following laxative will usually be effective :

244 R.	Fluid extract buckthorn bark.....	1 ounce.
	Fluid extract butternut bark.....	1 ounce.
	Fluid extract mandrake.....	$\frac{1}{2}$ dram.
	Bicarbonate of potash.....	1 dram.
	Syrup of ginger.....	2 ounces.

One teaspoonful to one tablespoonful when necessary.

The bowels may be effectually and more quickly moved by the following cathartic enema than by any laxative medicine given by the mouth. Enemas, however, act only on the inferior portion of the intestine, while cathartics may be trusted to empty the intestinal tube completely from end to end.

245 R.	Senna leaves.....	2 drams.
	Boiling water .....	8 ounces.

Infuse the leaves in the water for one hour. Strain and dissolve in the infusion.



Sulphate of soda.....	2 drams.
White sugar.....	$\frac{1}{2}$ ounce.
Sweet oil.....	$\frac{1}{2}$ ounce.

Use the whole for one injection. The effects of the above will be more prompt and satisfactory if the patient lies on the left side a few minutes after the enema has been administered, in order to allow the liquid to gravitate into the intestine.

If the false pains be caused by fatigue the patient should secure perfect rest, and take the following gentle soothing remedy, by which natural sleep will be secured.

246 R. Fluid extract skullcap.....	2 ounces.
Bromide of potash.....	$\frac{1}{2}$ ounce.
Glycerine.....	1 ounce.
Water.....	1 ounce.

One to three teaspoonfuls in water to allay nervous irritability and procure sleep.

In some cases the false pains are caused by uterine rheumatism. When the suffering can be distinctly traced to this disorder the following remedies usually remove it:

247 R. Fluid extract Manacá.....	$\frac{1}{2}$ ounce.
Glycerine.....	1 ounce.
Water.....	1 ounce.

One teaspoonful one hour before meals.

248 R. Tincture of aconite root.....	10 drops.
Tincture of gelseminum.....	1 dram.
Simple syrup.....	1 ounce.
Water.....	1 ounce.

One teaspoonful one hour after meals.



When no special cause can be discovered for the difficulty, the following remedies are very often effective:

249 R. Compound tincture of Virginia snakeroot.....2 ounces.

Twenty drops every hour in a warm infusion of catnip until relief be obtained.

250 R. Crawley root.....20 grains.

Pleurisy root.....20 grains.

Bloodroot .... 6 grains.

Ipecacuanha..... 2 grains.

The remedies must be all in fine powder. Mix thoroughly. Divide into six powders. Give one every two hours in syrup.

#### AFTER PAINS.

The separation of the after-birth from the internal surface of the uterus is accompanied by the tearing across of the blood-vessels passing between the mother and her offspring. Although the mouths of these blood-vessels are closed by tonic uterine contraction as soon as the placenta separates, so that dangerous hemorrhage cannot commonly take place, yet considerable oozing of blood occurs in all cases into the uterine cavity after delivery, leading to the formation of clots. These pains have the effect of expelling the clots and of closing more perfectly the mouths of the bleeding vessels, so as to put an end to further hemorrhage.

After-pains are usually very trifling, or altogether absent in women after a first confinement; but they always annoy, more or less, those who have previously borne children. When not too severe their influence is decidedly salutary, and they do much good in the way already indicated. But they are sometimes so distressing as to cause severe suffering. In these cases, what-



ever tends to excite uterine contraction should be carefully removed. The bladder and bowels must be relieved at suitable intervals. If the latter will not act naturally, the following formula will do the work effectively and gently, if the dose be not too large :

251 R. Sulphate of soda.....1 ounce.  
Ginger tea.....4 ounces.

Dissolve the remedy in the infusion. From one-quarter to one-half of the above may be taken; if no cathartic effect be observed at the end of two hours another dose may be given.

In addition to the above treatment, flannel cloths wrung out of hot water should be laid on the lower part of the abdomen and changed frequently.

The action of the cathartic along with the use of hot fomentations will often cause the prompt discharge of all the clots from the uterus, followed by immediate and complete relief to the patient. If these measures do not succeed, and there are reasons for believing that there may be clots of blood or bits of placenta imprisoned in the womb which it cannot dislodge, a surgeon must be called to remove them.

In some of the severest cases after pains depend on a spasmodic condition of the uterine muscular fibres due to general nervous disorders. When this is the cause of the suffering, the following treatment is very effective :

252 R. Hops..... $\frac{1}{2}$  pound.  
Tansy leaves.....2 ounces.

Pour over the above four ounces hot alcohol and as much boiling water as will moisten them; lay the poultice over the lower part of the abdomen; when it



becomes cool heat it again and reapply. Along with this application give the patient one of the following prescriptions as directed :

253 R. Caulophyllin.....10 grains.  
Compound powder of ipecacuanha and opium..20 grains.

Mix intimately, divide into three powders, and give one dose every three hours in a little syrup until the patient be relieved.

254 R. Fluid extract skullcap.....1 ounce.  
Fluid extract cramp bark.....1 ounce.  
Fluid extract wild yam.....1 ounce.  
Glycerine.....1 ounce.

One or two teaspoonfuls every two or three hours until relief has been obtained.

*The show.*—At the beginning of labor the maternal passages are prepared for the requisite dilatation by a profuse secretion from the neck of the womb and the vagina of a thick, glutinous, colorless secretion, while the parts from which it flows become softer and more elastic. If congestion has previously existed it will be relieved. Shortly after the discharge appears it becomes tinged with blood and mixed with semi-solid particles of mucus, which admirably serve to lubricate the parts, and facilitate the progress of the labor. The ease with which child-birth is accomplished depends largely on the quantity and lubricating qualities of this secretion. If it be secreted copiously, the parts will be properly lubricated and softened, when an easy and speedy labor may be anticipated. But if the passages be dry and contracted, a lingering and severe labor will probably precede a slow delivery. This mucous discharge tinged with blood is also one of the surest signs that labor has actually begun, and is popularly known as the show.



## THE LOCHIA.

After delivery the enormously enlarged womb quickly returns almost to its virgin state. The superfluous portion is liquefied by undergoing fatty degeneration to render its removal possible. A part of this liquid is absorbed into the general circulation, and a part escapes by the vagina. At the separation of the after-birth considerable blood escapes as already stated. The liquids resulting from uterine disintegration and from the oozing already mentioned mainly enter into the composition of the discharge known as the lochia. During the first few days the blood therein greatly preponderates, but it soon assumes a watery character, and may present a greenish hue. It afterward becomes whitish, and ultimately ceases altogether. As this discharge is of great importance to the well-being of puerperal women it should receive careful attention. It is rarely too copious, but is not unfrequently scanty, a state of things very apt to be followed by fever and other disagreeable, perhaps dangerous symptoms.

The lochial discharge serves to relieve congestion and to prevent attacks of inflammation. During fever it diminishes or perhaps disappears altogether. During the slight fever usually accompanying the first appearance of the milk the lochial discharge becomes scanty, but reappears as soon as the lacteal secretion is established.

The discharge has a peculiar odor, being much stronger in women of dark complexions. Generally the lochia require no medical treatment. It is only when the condition of the discharge evidently affects the patient's health unfavorably that any attention beyond perfect cleanliness is required.



Sometimes, however, the lochial flow is excessive, causing debility ; in these cases, remedies must be employed to check it and to invigorate the patient. The following remedies will prove valuable in moderating the discharge :

255 R. Geraniin .....12 grains.  
 Caulophyllin.....12 grains.  
 White sugar..... 1 dram.

Triturate the remedies together in a mortar. Divide into 6 powders. Give one powder in water every two hours until the desired effect be obtained.

The following prescription is a very valuable tonic when the lochial discharge has been so copious as to debilitate the patient :

256 R. Sulphate of quinine.....30 grains.  
 Tincture muriate of iron..... 1 dram.  
 Glycerine..... 1 ounce.  
 Water to make ..... 6 ounces.

One tablespoonful in water about 10 A. M. and 4 P. M. until the remedy is all used.

If the excessive discharge be accompanied by fever, frequent pulse, hot skin, furred tongue, and pains all over the body, the patient should be placed on milk diet, and the bowels gently moved with the following laxative :

257 R. Sulphate of soda..... 1 ounce.  
 Fluid extract senna..... 1 dram.  
 Ginger tea..... 4 ounces.

Dissolve the medicine in the tea, add the extract of senna—one-third to one-half may be given. If no cathartic effect be observed at the end of two hours another dose may be given with advantage.



If the fever be not due to some grave complication such as peritonitis or puerperal septicemia it may be removed by the following prescription :

258 R.	Tincture aconite root.....	15 drops.
	Fluid extract black snake root.....	2 drams.
	Glycerine.....	1 ounce.
	Water to make.....	3 ounces.

One teaspoonful every hour or two, in a little water until the fever disappears.

If the lochia be rendered copious by the retention of a piece of membrane or of the after-birth in the uterus, the decomposition of these organic substances will render the odor of the discharge peculiarly offensive. When this is known to be the case, the following anti-septic lotion should be injected into the vagina once or twice a day, or if need be into the uterus itself with suitable precautions. The latter operation always requires the skill of an expert.

259 R.	Solution of chlorinated soda.....	1 ounce.
	Warm water.....	20 ounces.

The whole to be used for one injection, or until the injected fluid returns quite colorless.

Sometimes the lochial flow having diminished in quantity, suddenly becomes increased and the faint greenish hue changed to bright red. This arises because the discharge of blood by which it was colored at first has reappeared. Sitting up too soon after parturition, or at a later period, too much exercise of any kind are the most frequent causes. Rest in bed is usually effective in arresting the difficulty, but if not, care must



be taken by the use of medicines and prolonged rest that secondary hemorrhage does not occur.

Under these circumstances the patient should be confined to bed. She should not get up for any purpose whatever. The following remedies may be used very successfully :

260 R. Fluid extract ergot.....1 ounce.

Twenty to thirty drops in water three times a day, about half an hour before meals. The preceding remedy is more effective when it is injected into the rectum than when taken by the mouth.

260½ R. Fluid extract fireweed.....1 ounce.

Glycerine. .... 1 ounce.

One teaspoonful twice or thrice a day, diluted with water.

The lochia may be checked prematurely from various abnormal causes. When this is the case fever of greater or lesser intensity is an almost invariable symptom. If it be possible the discharge should be restored and continued as long as may be necessary ; this can always be accomplished, except the checking of the lochia be due to the progress of some very serious inflammatory affection. The bowels should be moved by the following mild laxative to remove whatever irritating matters they may contain.

261 R. Fluid extract butternut root.....1 ounce.

Fluid extract buckthorn bark.....1 ounce.

Syrup of ginger.....½ ounce.

One to three teaspoonfuls in water when necessary.



After the above remedy has acted the patient should drink freely of the following simple but effective remedy, which will rarely fail to restore the lochial flow when it is suppressed from simple causes.

262 R. Motherwort.....1 ounce.  
Hot water.....1 pint.

Infuse one hour, strain, and let the patient drink of it freely while the infusion is quite hot.

A large poultice of powdered slippery elm bark, sprinkled freely with two or three drams of camphor, should be laid over the lower part of the abdomen and the thighs, and changed as often as it becomes cool.

When the above treatment fails to cause the suppressed lochia to reappear, grave mischief is probably approaching, and a skillful physician should be consulted.

#### PRECIPITATE LABOR.

Prolonged and severe labors are attended in many cases by great dangers, but too rapid labor has perils peculiar to itself, which are sometimes of a very grave character. In perfectly natural labor the pains begin almost imperceptibly, and gradually increase in duration and intensity; but in abnormally rapid labors the pains are severe, bearing down and almost continuous from the first, accompanied by involuntary spasmodic action of the abdominal muscles. If the mother's soft parts be relaxed the child may be born before she has time to lie down. Precipitate labor may be due either to the occurrence of uterine contractions of unusual severity and power, or to a very large pelvis with very dilatable soft parts, or to all these conditions combined.



The same result will be favored if the child's head be much below the average size.

Rupture of the womb may occur from the extreme power of the contractions, or the violent uterine action may thrust the child's head through the mother's soft parts so violently that the passages have not time to dilate, and extensive tearing may be caused. Complete relaxation is apt to follow sudden emptying of the womb, causing uterine inertia, followed by copious or even fatal hemorrhage. Instances have occurred in which the child was dashed to the floor, and the umbilical cord broken or torn from the navel. The extreme exertion to which the patient is sometimes impelled may cause an epileptic or apoplectic attack. In some cases the suffering is so great and continuous that the patient is thrown into a state of maniacal frenzy, and becomes temporarily unconscious of and not responsible for her acts.

In the most rapid cases of precipitate labor there is no time to adopt treatment intended to regulate the violent uterine action, as the labor is completed almost as soon as it is begun. In any case the patient should lie down from the very beginning of the labor and cry out loudly during every pain, not only for the purpose of giving vent to her feelings, but to moderate muscular action as far as possible. When time is afforded, either of the following prescriptions may be used with good effect in moderating excessive uterine action and in relieving pain :

263 R. Powdered opium..... 8 grains.  
Solid extract belladonna.....  $\frac{1}{2}$  grain.  
Powdered licorice root..... 30 grains.  
Glycerole of starch a sufficient quantity.



Mix the ingredients. Make into five suppositories. One may be placed in the rectum when pain is severe.

264 R. Chloral hydrate.....30 grains.  
Syrup of tolu..... 2 ounces.

One dessert-spoonful to one tablespoonful to relieve pain. If relief be not obtained by the first dose it may be repeated in one hour.

If these remedies do not suffice, a physician may place the sufferer moderately under the influence of chloroform.

#### YIELDING OF THE JOINTS IN LABOR.

The adult pelvis is composed mainly of three bones, one on each side known as the nameless bones, and one behind called the sacrum, or sacred bone, because it was offered in sacrifice to the gods in ancient times and in heathen countries. These several bones are firmly united together by immovable joints.

During gestation, as before stated, the womb and pelvic tissues generally receive an unusual supply of blood and fluids. The joints uniting the pelvic bones partake in the general softening that occurs from this cause. But no enlargement of the maternal passages is brought about in this way that can be of any assistance in facilitating labor. If the pelvic bones were completely separated at the joints, only the fraction of an inch, they would readily separate to any farther extent during child-birth to allow every labor to be completed without resistance from the bony parts. But there are many cases in which the child's head is forced down into the mother's pelvis by the most powerful uterine



contractions, while the pelvic joints refuse to yield, although very little extra space would permit the child to pass easily. Moreover, the fit between the foetus and the maternal passages is sometimes so tight that even after the instruments are applied the utmost strength of the operator is required to effect delivery.

If the pelvic joints separated during labor the results would amount practically to a very serious dislocation, and the bones could not re-unite so rapidly as to enable the mother to walk about without inconvenience soon after delivery, without any of the symptoms which could not fail to be manifested if the pelvis had gone to pieces during parturition.

Therefore, although there is no question but that the pelvic joints become softened during gestation, they do not separate at parturition so as to appreciably enlarge the size of the maternal pelvic canal.

#### POWERLESS LABOR—UTERINE INERTIA.

The conditions that obtain in different cases of labor are almost as varied as the physical aspects of the individuals. The power by which labor is continued and completed frequently undergoes remarkable fluctuations. Sometimes slow labor is replaced by effective pains bringing the birth to a speedy end. Or steady progress may be checked by diminution or failure of uterine action. Temporary cessation or moderation of the pains during a tedious labor is sometimes an advantage by affording the woman a short period of rest, but a total failure of uterine power is always a very serious complication of parturition.

*Causes.*—When a muscle is unduly stretched its contractile power is diminished in proportion to the amount



of stretching to which it has been subjected. Therefore, when the womb has been unduly distended by an excessive quantity of liquor amnii, it is sometimes incapacitated from exerting enough power during labor to carry the work to a successful termination.

Powerless labor may be due to a naturally weak and delicate constitution, or to some exhausting disease producing general debility. Defective uterine action is often observed in very young mothers, and women who become pregnant for the first time late in life often have slow, perhaps powerless labors.

The debilitating effect of high temperature is sometimes apparent in the production of powerless labor in Europeans who live in tropical countries. Women who have given birth to many children in rapid succession are very liable to uterine inertia. The arrival of the doctor will occasionally put a stop for a short time to the progress of labor in nervous, sensitive women.

Displacements of the womb during parturition, rendering the descent of the child impossible, the presenting part being forced against the pelvic bones, may cause uterine inertia by prolonging the work until the uterus is totally exhausted. Disorders affecting the walls of the uterus, such as neuralgia, gout, rheumatism, congestion or inflammation, may cause a paralytic condition of the womb during labor. In natural labor the womb contracts equally on its contents, but sometimes only a portion of the organ contracts, resulting in the loss of power under consideration; and whatever power may be evolved is apt to be useless because misdirected.

*Treatment.*—The mildest measures should always be employed first. In all cases in which the progress of parturition is tedious, the patient should occupy herself



with something calculated to divert her attention. A change of the position from the recumbent to the erect, by allowing the child to gravitate toward the lower part of the uterus, will often excite the womb to renewed contraction. The patient may even be made to walk about the room with decided advantage, even when labor is well advanced. If the fundus of the uterus seems to have fallen too far forward, a bandage applied around the woman's body to draw up and support it, will sometimes have an excellent effect. One of the safest and most direct methods to assist a powerless or weak labor, is to place one hand on the patient's back and the palm of the other on the abdomen over the fundus uteri; then, during a pain, to make firm pressure downward in the direction of the long axis of the womb. If the patient be known to have labored under tardy and weak uterine action in previous labors, she should not be allowed to expend her strength during the first stage, but to carefully husband it for the severe exertion to be expected at the end of the second stage.

If there be reasons for assuming that the slow labor is due to want of sleep, fatigue, or anxiety of mind, the patient should be put to sleep for a few hours with a dose of the following prescription, hoping that when she awakes refreshed, more effective pains will be inaugurated:

265 R. Bromide of potash.....1 dram.  
Chloral hydrate.....1 dram.  
Syrup of tolu.....3 ounces.

Dissolve the medicines in the syrup. Give one tablespoonful when sleep is required. If sleep be not secured in one hour an additional tablespoonful may be given.

If the patient has been constipated previously, the



bowels should be relieved by the following cathartic enema before the anodyne is given :

266 R. Senna leaves .....2 drams.  
Boiling water.....8 ounces.

Infuse the leaves in the water for one hour. Strain and dissolve in the infusion :

Sulphate of soda.....2 drams.  
Molasses.....2 ounces.

Use the whole for one injection. After the enema has been given, the patient should lie on the left side about ten minutes to allow the liquid to gravitate into the intestine.

In some cases the following diuretics to set the kidneys working will exert a very good effect :

267 R. Cleavers.....1 ounce.  
Hot water. ....1 pint.

Infuse one hour, strain, and allow the patient to drink the infusion freely.

268 R. Hair-cap moss.....1 ounce.  
Hot water.....1 pint.

Infuse one hour, strain, and allow the patient to drink the infusion freely.

In those cases in which no special cause for the slow labor can be detected, the following remedies often exert a singularly good effect, in strengthening the uterine contractions and thus hastening labor safely :

269 R. Fluid extract cotton root bark.....1 ounce.  
Glycerine.....1 ounce.  
Water.....1 ounce.

One teaspoonful in water every two hours until four



doses have been taken, or the desired effect has been obtained.

270 R. Fluid extract blue cohosh.....3 drams.  
Glycerine.....1 ounce.  
Water.....1 ounce.

One teaspoonful in water every two hours until four doses have been taken, or the desired effect has been obtained. These safe and mild measures will often be quite successful, but sometimes they will fail. When this is the case, some operative procedure will be required at the hands of a competent surgeon.

#### CARE OF THE NIPPLES BEFORE CONFINEMENT.

The nipples of virgins are often small and short, because they have been habitually pressed down into the breast by closely fitting clothing. The membrane covering the nipples and the areola is very tender; and, without suitable preparation, it is ill calculated to endure, without laceration, the vigorous pulling of a hungry infant; but, by proper treatment, these delicate structures can be very much toughened, and the painful fissures, so common among nursing mothers, be prevented. For this purpose many different preparations have been advised by various authorities, all of which, doubtless, possess some value. None are better, however, than a strong infusion of green tea, or the following prescription:

271 R. Tannic acid.....10 grains.  
Glycerine.....  $\frac{1}{2}$  dram.  
Spermaceti ointment..... 7 drams.

Triturate the ingredients together in a mortar. Apply the ointment to the nipples with gentle rubbing overy



night before retiring. Whatever preparation may be used proper manipulation of the nipple must not be neglected, as that is, perhaps, the most effective part of the treatment.

#### LACTATION AND CARE OF THE BREASTS.

As already stated, the breasts usually sympathize promptly with the womb during early pregnancy; they become enlarged, tender, and, perhaps, secrete a little milky fluid. But the flow of milk intended for the child's nourishment does not commonly appear until the third day after delivery. About this time the mammae become enlarged, their vessels distended with blood, and the milk is secreted copiously. In some cases all this takes place without any disagreeable symptoms whatever; but in many cases it is accompanied with a chill and rise of temperature, known as milk fever. This rarely requires any treatment, as it seldom lasts more than one day, disappearing with a copious perspiration, or as soon as the flow of milk is fully established. If any remedy be required to reduce the patient's temperature, five drops of the tincture of aconite root in half a glass of water will be very effective. Give the patient one teaspoonful of the mixture every half hour or hour until the fever abates.

Sometimes the breasts remain hotter than natural after the general feverishness has disappeared. If so, they should be covered with soft cloths wet in cold water, with or without a little alcohol or cologne water.

If the weight of the breasts be a source of annoyance to the mother, relief may be afforded by suspending them from the neck in slings.

Rubbing the breasts with warm oil does good by



facilitating the flow of milk when they become hard: but the breasts of nursing women should never be rubbed after they have become tender, nor should the rubbing be continued if they are made more tender thereby.

Improper and ill-timed manipulation often does great injury, by favoring the development of broken breast which it is intended to prevent. Mammary abscess is practically a boil in the breast. Who ever knew of a boil in any other part of the body to be benefited by friction and pressure?

By putting the new-born child to the mother's breast early, and at intervals of about two hours afterward, advantage is taken of the well-known sympathy existing between the breasts and the uterus, by which the latter contracts when the former are irritated. The tonic contraction of the womb is thereby promoted, and the occurrence of secondary hemorrhage prevented. By this practice the child also secures the first secretion of milk called the colostrum, which, having cathartic properties, clears the bowels from the matters that partially fill them at birth, and also prepares the mucous membrane for its new and important duties.

Sometimes the milk escapes from the breasts almost as fast as secreted; to a certain extent this is beneficial by relieving the mammæ of the surplus milk which the young child cannot use; but when the lacteal fluid continues to percolate constantly from the nipples the difficulty assumes a serious aspect, because the child is thereby deprived of its natural sustenance, while the mother's clothing is saturated by the escaping fluid. In other cases the milk is retained perfectly well until the child be applied to one breast, when the other, being excited by sympathy, expels the milk it contains



sometimes in minute jets. Medicines are useless in these cases. Something, however, may be done by putting the child to nurse regularly in order to prevent over distension ; frequent and irregular suckling should be avoided. If the difficulty cannot be overcome by these means, the mother must cease nursing the child, and resort to artificial feeding.

The application of belladonna to the breasts has been recommended, but the effect of this drug is to dry up the milk entirely.

The great variety in the milk producing qualities of different women is not a little surprising, both in regard to the quantity and the quality of the secretion. Sometimes a delicate woman in feeble health will have more than her child can take, while a young, vigorous, and well developed woman produces little or none. In some the milk fills the breast at the usual time after parturition, while in another it appears tardily and with apparent difficulty.

Occasionally, the secretion of milk is prevented or suppressed by a fever of a more serious character than that usually attending the first flow of milk ; if this condition be not too severe nor lasting, the milk may again flow freely into the breasts when the fever passes away. In the meantime the child may be fed from a bottle having a nipple so that it may not forget how to suck before the mother can resume nursing. Poultices made of the leaves of the castor oil plant applied to the breasts quite warm have an excellent effect in stimulating the lacteal secretion.

An abnormally copious flow of milk is observed in some mothers. When it is of a suitable quality the child thrives in the most satisfactory manner, but is



annoyed by the milk flowing into its mouth faster than it can swallow while nursing.

If the mother possesses a very vigorous constitution indeed, she may suffer no injury, but if at all delicate she is apt to be exhausted by the ceaseless drain. In the treatment of such cases we should seek to restrain the lacteal secretion by limiting the mother to the smallest possible quantity of fluid that will quench her thirst. If her health be likely to break down she should cease nursing, and feed her child artificially. In another class of cases the milky secretion is too abundant, but the increased quantity depends on an augmentation of the watery parts of the fluid. This state of affairs has a disastrous effect both on the mother and her child. The latter does not thrive, while the former rapidly emaciates, loses appetite, suffers from dyspepsia, heart-burn, water brash, obstinate diarrhea, with distressing flatulence. This affection is specially dangerous to those mothers who have any lurking chronic disorder. The only effective remedy is to have the mother cease nursing. When that alternative has been decided on, the secretion may be dried up by rubbing the breasts with solid extract belladonna, or by taking two or three drops of the tincture internally three or four times a day in a teaspoonful of water, and avoiding the use of liquids as far as possible.

#### CHANGES IN THE BLOOD DURING PREGNANCY.

Very important and profound changes take place in the composition of the blood during pregnancy. It becomes more watery, contains less albumen; the red globules are notably fewer, and the fibrin is increased.



The latter is the principle to which the vital fluid owes its power of coagulation. The blood coagulates much more readily during gestation than at other times, a fact that explains why it sometimes forms clots inside the blood-vessels, producing very disastrous consequences by blocking them up, and cutting off the supply of blood from these parts to which the occluded vessels proceed. Until the last few years it was generally believed that the blood of pregnant women was apt to be abnormally rich, a condition to which the name of plethora was given, and the lancet was often used with disastrous effects to remove what very rarely had any existence, the vital fluid being, in fact, poorer than before conception. The impoverished condition of the blood continues to slightly increase during the progress of gestation; this is probably a wise provision of Nature to guard against the occurrence of inflammatory affections after labor which would be very apt to be developed if the blood were preternaturally rich.

It may be objected that such a condition of the blood should not exist in what is properly regarded as a healthy condition. And we may admit that pregnancy, in a perfectly healthy state of the system, should not be accompanied by a specially thin, watery condition of the blood. But although pregnancy, theoretically, is not a state of disease, the fact remains that very few pregnant women are as well when in that condition as before conception. The practical deduction from these facts is, that pregnant women ought to be well fed, and if they take any medicines at all the tonic variety will probably be most serviceable; depleting treatment of every kind being inadmissible.



## CHANGES IN THE URINE DURING PREGNANCY.

Certain changes occurring in the urine of pregnant women have attracted the attention of medical men from ancient times. The most notable of these changes is a peculiar flocculent deposit. If the urine of a pregnant woman be allowed to stand in a tall, narrow vessel exposed to light and air, but protected from dust, a peculiar deposit is formed to which the name of *kyestine* has been given. It appears in from two to seven days in the center of the liquid, and resembles a fleecy mass of cotton wool. It soon afterward rises to the top of the fluid, and forms a delicate pellicle which resembles flakes of hardened tallow on the top of cold soup.

In the course of a few days the scum breaks up, and falls to the bottom of the vessel. The urine does not usually present this appearance until after the second month of gestation, and it commonly appears during the last two months.

Although *kyestine* is found almost invariably in the urine of pregnant women, much less importance is attached to its presence now as an evidence of gestation than formerly, because it has lately been observed in other disordered conditions both in women and men.

## THE IMMEDIATE EFFECTS OF LABOR ON THE SYSTEM.

In many cases the immediate effects of labor on the system of the puerperal woman closely resemble the depressing influence of surgical operations or injuries, to which the name of shock has been given. Frequently no such influence is apparent, but in others prompt and effective supporting measures are required to avert serious consequences. On the receipt of a severe injury the sufferer becomes cold, faint and tremulous, the pulse



is small and fluttering, the mind depressed, the countenance anxious, speech and thought are incoherent, the skin is bedewed by a cold perspiration, and there are in many cases nausea and vomiting. This condition continues a variable period, depending on the severity of the injury and the vigor of the patient.

There are very great differences in the mental fortitude of individuals. Some suffer many of the consequences of excessive shock from the mere apprehension of some dreaded injury, while others may be severely injured and yet escape with little suffering. When the feelings are aroused, as in the heat of battle, injuries are often received by soldiers quite unconsciously. It is, therefore, evident that the mental condition of the individual at the time an injury is received materially influences its immediate influence on the system. The effects of shock are observed in a greater or lesser degree in every case of severe and prolonged labor, the severity being governed by the physical and mental condition of the woman. We have attended a young mother who was harassed by gloomy forebodings for months concerning the issue of her approaching confinement. Although she had a short, easy and natural labor, she almost perished from shock immediately after delivery. The most energetic measures barely served to resuscitate her.

The depressing influence of labor is more likely to be manifested in women who have suffered much pain, who have undergone severe exertion, or have been weakened by undue loss of blood.

As shock is made up of both a mental and a physical element, words of kindness and encouragement have a favorable influence.



The temperature of the sufferer should be maintained by bottles of hot water to the feet, and other parts of the body if necessary.

Smelling salts may be applied to the nostrils, and wine, whiskey or brandy diluted with water given in divided doses until the immediate effects of shock have disappeared. Prolonged rest should afterward be prescribed until the patient recovers.

Immediately after delivery, in favorable cases, the pulse falls ; and as long as it continues slightly below or at the normal degree of frequency, the condition of the patient is sure to be satisfactory. Rapidity of the pulse after parturition, especially if it be maintained for several hours, is always an unfavorable omen.

In estimating the significance of this symptom, we must remember that very trivial circumstances will often temporarily quicken the pulse of a recently delivered woman.

During the last few years the study of the temperature of the human body in diseases of all forms has afforded very valuable data on which to base an accurate diagnosis and successful treatment. The severe muscular exertion usually attending the second stage of labor often causes a slight rise of temperature, which soon falls to or below the normal standard. For a few days there is often a slightly feverish condition, due in all probability to the rapid disposal of the effete matter arising from uterine involution. On the third day the milk fever commonly appears, which subsides as soon as the milk is freely secreted. But if there be a continuous rise of temperature above one hundred degrees, Fahrenheit, it is an evidence of the existence of some complication.



In the days when medical men believed that the disorders attending parturition required for their cure the depressing influences of mercury, bleeding and blistering, they added to these remedies the slop diet that has been so long considered necessary to the safety of the puerperal woman. The injurious influence on medical practice of the starvation plan of feeding puerperal patients, has been continued long after the depressing treatment formerly associated with it had passed away; and the evil results are now apparent in the slow recovery from the immediate effects of labor so often observed. The diet of recently delivered women should be nutritious, but not stimulating. A cup of good beef-essence, some bread and milk, or an egg beaten up with milk, slightly sweetened, may be given with advantage soon after delivery. As soon as the patient's appetite returns, there are no good reasons why she should not have more solid, but easily digested, food, such as chicken or fish. A trial of both kinds of diet will convince any unprejudiced observer that convalescence from parturition is both more rapid and satisfactory when the patient's strength is supported by nourishing food, while she undergoes no increased risk of any inflammatory complication because she indulges in a nutritious diet.

#### INFLAMMATION OF THE BREASTS.

While a woman is nursing, the condition of her breasts renders them peculiarly liable to inflammation. Women of a weakly, delicate, or scrofulous constitution seem to be specially liable to this painful disorder. It presents several varieties, but, as the management of all is similar, we shall not perplex the reader with needless



divisions. In the great majority of cases the inflammation begins in the milk ducts, and, if not checked, it quickly spreads to the substance of the gland. Mothers who have had one attack are liable to be affected subsequently. The condition of the breasts after parturition requires very careful attention, so that the very first indications of incipient inflammation can be detected and removed. This disorder is more common in the first two months of lactation, but it may take place any time during the nursing period.

*Causes.*—Exposure to cold is the most frequent and powerful cause of mammary inflammation, although the irritation of sore nipples, the pressure of stays, or direct injury, sometimes excites the disease. Undue accumulation of milk in the breasts undoubtedly causes painful distension. When this is the case, the milk should be removed, preferably by drawing the nipple with the mouth or by putting a young puppy to the work. Breast pumps rarely work well and often do much harm. When the lacteal secretion unduly distends the breasts, it becomes a source of discomfort to the nursing mother, and, perhaps, injury; but the presence of the natural secretion in the gland has much less to do than is generally supposed in causing broken breasts.

*Treatment.*—When any part of the mammary gland becomes inflamed, our first efforts should be directed to overcome the diseased action, in order to prevent the formation of an abscess, which will most certainly take place if the inflammation be not effectually checked. In the very beginning of the mischief, very gentle frictions of the hardened parts of the gland with the following preparation are useful in assisting the flow of milk toward the nipple :



272 R. Camphor..... $\frac{1}{2}$  ounce.  
 Olive oil .....2 ounces.

Dissolve the camphor in the oil by means of heat and apply the mixture to the breast with gentle friction.

But after the breast has become tender, there is nothing that will do more injury than rubbing. Mammary abscess is substantially a boil, and cannot be benefited by pressure and friction any more than any other inflamed part of the body. As soon as the breast becomes tender, the bowels should be moved freely by the following compound:

273 R. Sulphate of soda.....1 ounce.  
 Fluid extract senna.....3 drams.  
 Ginger tea.....4 ounces.

Dissolve the first ingredient in the ginger tea, add the senna. Give the patient one-half the quantity at the first dose. If no cathartic effect be obtained at the end of two hours another dose may be given.

The infant should not be allowed to nurse from an inflamed breast, particularly after suppuration has occurred. The milk must be removed by applying young puppies or by a suitable breast-pump, and the flow of milk into the breasts must be prevented by the use of an active saline cathartic like the preceding. After the remedy has acted freely on the bowels the diseased breast may be covered with a warm poultice of fresh poke root, prepared for use by baking in an oven. If the fresh root cannot be obtained, prescription 274 may be substituted.



- 274 R. Fluid extract poke root.....1 ounce.  
 Warm water.....4 ounces.

This remedy should be applied to the breast by means of cloths steeped therein and changed frequently.

Professor King recommends the following stimulating liniment and plaster :

- 275 R. Oil of cajeput .....1 ounce.  
 Oil of sassafras.....1 ounce.  
 Olive oil .....1 ounce.  
 Camphor..... $\frac{1}{2}$  ounce.

Dissolve the camphor in the oils by means of a gentle heat and apply the liniment to the inflamed breast three times a day, and follow the application with a warm linseed meal poultice or fomentation. Or the following plaster may be applied instead of a poultice, after the breast has been bathed with the liniment made according to the prescription 275 :

- 276 R. Castile soap.....3 ounces.  
 Lard.....2 ounces.  
 Beeswax.....1 ounce.

Reduce the soap and beeswax to fine shavings, add the lard and melt the whole together by means of a gentle heat. When thoroughly melted and mixed add the following solution gradually :

- Jamaica rum..... $1\frac{1}{2}$  ounce.  
 Camphor..... $1\frac{1}{2}$  dram.

Dissolve the camphor in the spirits.

Continue stirring the mixture until it is cold. The above preparations are to be used as follows : cut a piece of linen in a circular form large enough to cover the whole breast, having a hole in the center for the



nipple to pass through. Then soften about one ounce of the above plaster by a gentle heat, and spread it evenly on the piece of linen. Then apply it all over the breast as hot as it can be borne. At intervals of four or six hours remove it, bathe the breast with the liniment made according to prescription 275, and reapply the plaster to the breast immediately. The plaster need not be renewed oftener than once in twelve hours, but the liniment must be used more frequently.

Much relief may be afforded to the patient, if the breast happens to be large and heavy, by slinging it up in a handkerchief tied around the neck.

If the inflammation continues to spread in spite of the diligent use of the above means, it becomes our duty to favor suppuration by the frequent application of linseed meal poultices. The latter will act more effectively in hastening the formation of matter if the following mixture be sprinkled over the surface of the poultices before they are applied :

277 R. Fluid extract poke root.....	1 ounce.
Fluid extract lobelia.....,	$\frac{1}{2}$ ounce.
Glycerine.....	$\frac{1}{2}$ ounce.

For external use only.

As soon as matter has formed in appreciable quantity it should be evacuated. The removal of even a very small quantity of pus, with the accompanying hemorrhage, greatly relieves the tension of the parts and often practically puts an end to the suffering. We do not think anything is gained by allowing the abscess to become almost or quite ready to discharge itself before the abscess be opened. By allowing the imprisoned pus to remain in the breast until the skin gives way,



a much larger cavity is formed internally, and an irregular, ragged opening externally, which heals with difficulty because of the quantity of tissue destroyed; and after the healing process has been completed the breast is usually puckered and deformed. Long, fistulous tracks through the breast are often formed by pent-up matter, which are always healed with difficulty. All these troubles may be obviated by the timely and skillful use of the lancet. After the abscess has been opened and the matter evacuated by gentle pressure, it should be syringed out with the following solution:

278 R. Tincture of iodine.....1 dram.  
Tepid water.....8 ounces.

The sides of the cavity should then be drawn together by strapping the breast with strips of adhesive plaster, so that healing may take place as soon as possible.

If the suppuration be copious, the patient's appetite must be improved and her strength supported by good food and by mineral and vegetable tonics. The following preparations will be found to assist very materially in this direction:

279 R. Tincture chloride of iron..... 1 dram.  
Sulphate of quinine... ..20 grains.  
Spirits of cinnamon..... 3 drams.  
Glycerine..... 2 ounces.  
Water to make..... 4 ounces.

One teaspoonful in water after meals.

280 R. Citrate of iron and quinine.....3 drams.  
Catawba wine.....4 ounces.

Dissolve the medicine in the wine. Take one dessert-spoonful after meals.



## FISSURES OF THE NIPPLES.

Cracks in the nipples constitute the most frequent and painful of all the minor affections to which nursing-women are subject. The severe pain occasioned to the mother every time the child nurses, and the strong tendency of fissures to cause irritation and inflammation with abscess of the breasts, render their prevention and cure very important. Proper attention to the nipples before parturition, as laid down in this work, will do much to prevent the occurrence of fissures during lactation. When the edges of fissures are inflamed and indurated the healing process cannot proceed. Under such circumstances the treatment should be commenced by the application of a poultice of slippery elm bark to the nipple and the areola. Enlargement of the fissure should be prevented by the use of a shield when the child nurses. The nipples of the shields usually sold are too deep, and the mother suffers as much pain and injury when the nipple is drawn into the shield as when it is pulled naked into the child's mouth. To prevent this the nipple of the shield should be made shallow enough to fit the mother's nipple by placing in it a bit of soft sponge, which should be carefully removed and cleansed every time it has been used, then placed in clean water until it be required on a subsequent occasion. After the inflammation in and around the fissures has been reduced by the poultices, the following preparations will do much to effect a cure, either of which will be useful:

281 R. Spermaceti ointment.....6 drams.  
       Balsam of Peru..... 1 dram.

Triturate them together in a mortar until they be



thoroughly mixed. Apply a small quantity to the nipples after the child nurses. The ointment should be carefully washed off before the child is nursed.

282 R. Mutton suet..... 1 ounce.  
 Balsam of Peru.....2 drams.  
 Glycerine.....1 dram.  
 Honey.....1 dram.

Melt the suet with a gentle heat, add the other ingredients and mix them thoroughly. Apply a small quantity to the nipples after the child nurses.

In some obstinate cases the following lotion applied to the fissures before the use of the above cerates does much to heal them:

283 R. Nitrate of silver.....4 grains.  
 Distilled water.....1 ounce.

Apply to the nipples once a day. The use of either the above cerates should be continued.

#### PUERPERAL FEVER.

The various diseases included under this head comprise the most dangerous and fatal disorders to which the puerperal woman is liable. For a long time their nature and treatment were a fruitful theme of discussion among doctors. It is only during the last few years that the disease has been properly understood and successfully treated.

*Causes.*—Smallpox, scarlatina, measles, etc., are caused by specific poisons which, when introduced into the human body under conditions favorable to their development, produce symptoms peculiar to themselves. The poison of smallpox never gives rise to scar-



let fever, nor does the poison of the latter disease ever cause measles. Every seed produces a plant after its own kind and no other. Puerperal fever seems, in some respects at least, to be an exception. Severe fevers may arise in puerperal women from many and very different causes. All the sources from which this disease may arise may be divided into two classes according as the poison was produced in the mother's own passages, or has been introduced into her body from without. The poison of erysipelas has so often been the evident cause of puerperal fever that some have considered the virus of both diseases to be identical. But this is an error. Puerperal women are liable to be exposed to the poisons of scarlatina, measles, or diphtheria, and if they be affected by them they do not commonly produce scarlet fever, etc., but puerperal fever with a very slight likeness, if any, to the disorder whose specific poison was absorbed. The puerperal condition seems to have the power of modifying the specific poison so that it loses the capacity to produce its own well marked lines of symptoms, but gives rise instead to the disease known as puerperal fever. These poisons seem to lose their identity when introduced into the system of the recently delivered woman, and they produce disorders which, although arising from different causes, bear to each other a very striking resemblance.

Fevers of the puerperal type have frequently been caused by poisons introduced into the patient's system on the hand or perhaps from the clothing of the doctor who had perhaps been lately conducting a post-mortem examination, or attending a case of erysipelas, scarlet fever, or diphtheria. The same grave symptoms may arise from the absorption by the mother of poisonous



matter from the decomposition of a portion of placenta that has been allowed to remain in the womb after labor, or from the absorption into her blood of other septic matters developed in the uterus and the genital canal.

#### CONTAGIOUS NATURE OF PUERPERAL FEVER.

There is no doubt but that this disease may be communicated from one puerperal woman to another by contact or proximity to the sick, or by nurses and physicians passing between the sick and the well. To illustrate this important point we abridge the following facts from the writings of various authors: "Two men, brothers and partners, attended in the space of five months twenty cases of midwifery, of these fourteen were affected with puerperal fever, and eight died. The only other known death from puerperal fever in the same town within the period named occurred in the case of a patient attended by a medical man who had assisted at the post-mortem of one of these puerperal patients. After this disastrous period the two brothers relinquished all their engagements for one month, in which time five of their cases were attended by other practitioners, and no case of fever occurred during that month. They then returned to practice, and several fatal cases again happened among their patients. Mr. Robertson, of Manchester, England, says that in the space of five months a certain midwife attended twenty cases belonging to a lying-in charity; of these sixteen had puerperal fever, and all died. The other midwives of the same charity, working in the same district, attended in the same time three hundred and eighty cases, none of whom were affected with puerperal fever. In



another large town containing many thousands of inhabitants and numerous medical men, fifty-three cases of puerperal fever occurred; of these no less than forty happened in the practice of one physician and his assistant.

*Cautions to puerperal women.*—In view of the above facts a medical man who has attended one case of puerperal fever, whether it terminated fatally or not, should not accept any case of midwifery for at least three months. During the former part of this time he should exercise great care in purifying his person and clothes by washing and the free use of antiseptics.

A puerperal woman is in danger of having puerperal fever communicated to her if she be attended during her confinement by a physician who is then attending any case of typhus, typhoid fever, scarlatina, smallpox, diphtheria, or erysipelas, particularly the latter disease. A physician who has lately made or assisted at the making of a post-mortem, more especially if it has been on the remains of a woman who died of puerperal fever, is very likely to communicate this disease to any lying-in woman he may attend. If medical men are not willing to protect their patients by refusing to serve when danger attends their visits, patients should protect themselves by refusing to employ doctors whose presence may bring death.

*Symptoms.*—The disease commonly declares itself on the second, rarely later than the fourth day after delivery. The earlier it appears the more dangerous it is likely to be. A rigor of varying severity usually signals the onset. The patient is depressed and conscious from the first that she is about to be assailed by a grave disease. The pulse is very frequent and com-



pressible, indicating profound debility. There are usually copious perspirations by which the feverish symptoms are not ameliorated. The milk and the lochia are usually almost or quite suppressed. In the latter stages diarrhea is almost invariably present. The discharges are most offensive. The tongue is flabby, broad, slimy, and early becomes covered with a fur which is at first whitish, but subsequently brownish or almost black and dry. Pain is felt early in the lower part of the abdomen which spreads rapidly over the whole region, frequently becoming so acute that the slightest pressure, even the weight of the bed clothes, cannot be endured. The patient's sufferings are greatly increased by the swelling of the abdomen accompanying the pain. The skin acquires a dusky, dirty hue. As the disease proceeds the breathing becomes shorter, more rapid, and difficult, the pulse small, soft, and irregular. Picking at the bed clothes and collapse announce the approach of dissolution. These are the symptoms usually observed in fatal cases. When recovery occurs improvement is usually observed before the graver symptoms are developed.

If women about to become mothers would carefully reduce to practice the cautions before laid down very few isolated cases of puerperal fever could occur. But if any should arise the very best medical skill must be employed from the beginning of the disease.

#### PUERPERAL ALBUMINURIA.

Albumen is an important element of nutrition, and exists abundantly in many kinds of food. It is also a normal constituent of the blood. When the kidneys are healthy, albumen cannot be found in the urine ; but



when these important organs are either functionally diseased or have undergone organic change, albumen is almost always excreted in the urine. Its habitual presence in disorders with which pregnancy has nothing to do is commonly indicative of some form of Bright's disease. But it is an event of much less importance when albumen appears in the urine of pregnant women than in those who are not in that condition.

It has been ascertained by very careful and extended observations that about twenty per cent. of all pregnant women excrete albumen in their urine: yet very few of these women suffer any inconvenience during gestation or at parturition. After the latter event the albumen usually disappears speedily and permanently. The albuminuria of gestation, in the great majority of cases, is therefore a comparatively harmless disease. But the occurrence of albuminuria during gestation is nevertheless sometimes a symptom of very great importance, because there can be no question but that it indicates a physical condition which often precedes puerperal convulsions.

*Symptoms.*—The mildest cases present no general symptoms that specially attract the attention either of the physician or patient.

In the severer cases dropsical effusion occurs in various parts of the body, the face is puffy, the legs swollen, the abdominal walls thickened. The urine is scanty and dark-colored. When boiled in a test tube it sometimes contains so much albumen that it coagulates almost as thick as custard. In the worst cases convulsions are preceded by dimness of vision and headache. All the blood flowing through the kidneys to be purified by them of certain effete matters contains albumen;



but this element is never allowed to escape through the kidneys from the blood by these organs when they are in their normal condition. But when the kidneys become diseased and lose the power to prevent the transudation of albumen, they partially fail to excrete certain poisonous materials from the blood, which by their retention becomes a poisonous fluid. The circulation of vitiated blood speedily gives rise to grave symptoms; but sometimes the condition of the patient is unsuspected until violent convulsions are developed during labor or after that event has occurred.

*Causes.*—The severest cases are probably those in whom Bright's disease existed in some form before pregnancy: a disordered condition which is exceedingly apt to be aggravated by gestation. The milder cases are those in which the kidneys are only functionally disordered by the pressure of the enlarged womb; the latter also transmits reflex irritation to the kidneys in very much the same way as it excites nausea and vomiting in the stomach. Albuminuria is most frequently observed in women during the first pregnancy, and in those who lace tightly.

*Treatment.*—When albuminuria is suspected the urine should be tested for albumen, which may be done by first ascertaining the reaction by test paper. If the fluid reddens litmus paper a teaspoonful or two should be poured into a test tube and boiled over a spirit lamp or smokeless fire: if it becomes opalescent, milky or partly solid, the presence of albumen may be inferred. If the urine does not redden litmus paper it is alkaline and should be acidified by a drop or two of nitric acid; after which, if it be boiled, the albumen will be apparent, if any exists in the suspected sample. The urinary



secretion of every pregnant woman should be examined from time to time, because it is of the utmost importance to ascertain at the earliest possible moment if the urine be albuminous; more particularly if there be any general symptoms pointing to this condition. If the disturbance be purely functional, wholly depending on pressure, the kidneys being sound, no serious symptoms may be produced, and the patient may go on to her full time, have an easy and safe parturition with a perfect and speedy recovery.

Advantage should be taken of every hygienic precaution with a view to maintain the patient's health. If the weather be cool or cold she should be warmly clothed, and even in hot weather drafts of cool air are to be very carefully avoided. The feet and limbs should be kept specially comfortable. A buckskin or chamois jacket worn during the day over the flannels is a most comfortable garment even in the coldest weather. The diet of pregnant women who suffer from albuminuria should be nutritious but digestible. Pure rich milk has in many cases a singularly good effect in maintaining the general nutrition and affecting the kidneys favorably.

The skin should be kept in active working order by the use of Turkish baths, at first two or three times a week; afterward, at least once a week throughout the whole period of gestation: this is specially necessary as long as the urine contains any traces of albumen.

If the patient cannot procure Turkish baths, or is unable to afford the expense, excellent results may be attained by baths of the following sort: Let the nude patient be seated on a chair having a broad wooden seat; cover her person from the neck to the floor with



several woolen blankets. Cotton garments or quilts are inadmissible because of the dangerous results if they took fire. Everything being arranged, an alcohol lamp having two or three burners should be placed under the center of the chair. By this means the temperature around the patient's person may be rapidly raised to a point at which free perspiration shall occur. Sometimes patients feel faint while taking the first two or three of these baths: this is specially apt to be the case if the skin has been previously very inactive. A few mouthfuls of cold water, a cold cloth applied to the head, or a little smelling salts, quickly relieves the tendency to syncope. After the patient has perspired freely she should be rubbed dry and the following lotion applied plentifully over her whole person, followed by dry rubbing with the hand of an assistant until the skin glows with genial warmth:

284 R. Alcohol.....	1 ounce.
Cologne.....	1 ounce.
Water... ..	10 ounces.

For external use only.

When the ducts of the millions of glands in the skin are kept free and the glands themselves stimulated to healthy action by baths of the preceding sort, the work of the weakened kidneys is greatly lessened and their recovery promoted. The functions of the kidneys and the skin are so intimately related that these organs are enabled to act for each other vicariously to a very important degree.

Constipation is another enemy of pregnant women who suffer from albuminuria. The bowels of such patients should be kept soluble by a laxative diet if pos-



sible ; but, if that does not suffice, the following remedy will act gently and effectively, often securing permanently good results :

285 R. Fluid extract buckthorn bark.....2 ounces.  
Fluid extract butternut bark.....2 ounces.

One teaspoonful once or twice a day two hours after meals, and another dose, if necessary, before retiring for the night. The medicine may be diluted with a little water.

The blood of these patients is always thin and watery. Their desire for food and digestive power should therefore be stimulated and the quality of the vital fluid improved by the use of one or other of the following preparations :

286 R. Tincture chloride of iron..... 3 drams.  
Muriate of quinine.....20 grains.  
Spirits of cinnamon..... 3 drams.  
Glycerine..... 2 ounces.  
Water to make ..... 4 ounces.

One teaspoonful in water after meals. No injury will be inflicted on the teeth by the above preparation of iron if the dose be properly diluted with water. If the mouth be rinsed with water before taking the medicine the teeth will not be blackened.

287 R. Pyrophosphate of iron..... ..30 grains.  
Boiling water..... 2 ounces.

Dissolve the iron in the water and add

Fluid extract gentian.....3 drams.  
Curacoa or whiskey.....1 ounce.  
Glycerine .....1 ounce.  
Water to make.....4 ounces.

One teaspoonful in water after meals.



288 R.	Phosphate of iron.....	30 grains.
	Phosphate of manganese.....	30 grains.
	Dilute phosphoric acid.....	$\frac{1}{2}$ ounce.
	Elixir Peruvian bark.....	2 ounces.
	Glycerine... ..	1 ounce.
	Simple syrup to make.....	4 ounces.

Shake the bottle and take one teaspoonful after meals.

289 R.	Bitter wine of iron.....	2 ounces.
	Spirits of cinnamon.....	3 drams.
	Fowler's solution.....	30 drops.
	Glycerine to make.....	4 ounces.

One teaspoonful after meals. The above is a very mild but effective preparation of iron.

If the traces of dropsy disappear that are observed in mild cases, under the eyes in the morning after getting out of bed, on the breast-bone or behind the ankle-bones, and the patient's condition evidently improves under the above treatment, very well; she will probably go on to her full time quite safely. But if the dropsical effusion increases, and the albumen in the urine be augmented, the patient should be carefully watched by a skillful physician, who should be placed in charge of the case, as convulsions are liable to occur at any moment.

#### PUERPERAL CONVULSIONS.

An eminent physician teaches that Nature provides a special supply of nervous force against the time of delivery. The statement is corroborated by the wonderful endurance exhibited by delicate women in sustaining the exhausting effects of parturition.

But the surcharged condition of the nervous system renders women specially liable to convulsive disorders



during gestation and at parturition. These disorders are then excited by causes which in their usual condition would have no such effect. Convulsions may occur either before delivery, during that time or afterward; they are, however, much more frequent while labor is in progress than at any other period. The disease under consideration is an acute affection of the nervous system characterized by loss of consciousness and of sensibility, and by spasms, and occurs in most cases as the result of some form of Bright's disease. In some cases the presence of masses of coagulated blood in the womb, or other mechanical irritation, may be the immediate cause of puerperal convulsions.

*Symptoms.*—Puerperal convulsions present two classes of symptoms: those preceding the attack and those manifested during the convulsive seizure. One of the most important and easily discovered premonitory symptoms is dropsy, which may be so slight as to be detected only on close examination. In these cases the tissues under the eyes are puffy in the morning, or a slight swelling that pits on pressure may be observed on the breast-bone or behind the ankles. In a more advanced stage the dropsical condition will be readily observed in other parts, particularly the feet, legs and labia majora. This may be accompanied by nervous irritability, restlessness, severe frontal headache, confusion of mind, loss of memory, twitching of the muscles, derangement of the eyesight, which has become dim, or perhaps objects appear to have the peculiar quivering observed in looking horizontally along the top of a very hot stove or furnace. In some cases objects may exhibit peculiar colors; the vision sometimes becomes obscured for the first time immediately before the con-



vulsive seizure, or the sight may have been failing for several months.

Occasionally patients complain of severe pain in the pit of the stomach, continuing for hours; when this is of unusual severity a convulsive attack almost invariably follows.

The symptoms presented during the attack vary very little except in duration and intensity. The patient seems at first to be in a brown study, which short period of quietude is quickly succeeded by rapid contortions of the face and eyelids. The spasms rapidly extend to the neck and other parts of the body, the trunk is bent backward like a bow, the limbs are extended and rigid, the hands close with the grip of a vise, the countenance is of a livid hue and horribly distorted, the eyes roll upward, become fixed, the pupils dilated and insensible to light. Finally, the diaphragm and respiratory muscles become involved, and breathing almost or quite ceases. The tongue usually projects from the mouth and is lacerated by the teeth. The blood flowing from the wounded tongue tinges the frothy saliva, which is forcibly driven out with a hissing sound between the clenched teeth. There is fortunately complete loss of consciousness; the patient neither hears, sees nor feels what would be otherwise the most awful suffering. As the fit passes off, the symptoms progressively ameliorate; the convulsive movements become less violent and finally cease. After the fit has entirely passed off, the patient remains in an unconscious or semi-conscious condition, proportioned to the depth and duration of the convulsive paroxysm.

Dull languor, with confused feelings and headache, are complained of for a day or more. The above is the



usual course of events when the sufferer has but a single attack or when considerable intervals of time exist between the seizures. In the gravest cases the convulsion is of such severity and duration that a single fit destroys life. In other cases one seizure succeeds another so rapidly that the patient has not time to recover her consciousness, and she remains in a comatose condition, which is only disturbed by another dreaded paroxysm. These are the prominent symptoms of an attack of puerperal convulsions, and when once witnessed cannot be readily forgotten. The mortality of both mothers and children in cases of convulsions is very great. The life of the child is in special danger, particularly when the paroxysms are severe and occur in rapid succession.

*Treatment.*—As we have shown in the preceding chapter, the approach of convulsions in the pregnant condition is heralded by symptoms which, although not very prominent, are readily discovered if attention be directed to them. When convulsions occur before parturition and that event is not precipitated by the paroxysm, the question of inducing premature labor may have to be anxiously considered, as that offers the only reasonable prospect of saving the mother's life in the severest cases. When the child is dead—a fact that can usually be ascertained by the cessation of the beating of its heart—there can be no question about the propriety of this procedure, under competent medical treatment.

Chloroform has a wonderful effect in controlling puerperal convulsions. Chloral hydrate is another agent of undoubted value. For the use of these agents, as well as for the general treatment of so grave a disease, the most skillful medical services are demanded.



## PUERPERAL INSANITY.

Some patients are subject to a temporary mania during labor, occurring at the time of their most intense suffering and due directly to it. The mania may come on suddenly during perfectly natural labor and is not usually accompanied or followed by any unfavorable symptom, as it passes off in a few minutes, leaving the patient perfectly rational. No alarm need be occasioned thereby, nor is any treatment but watchfulness necessary. But puerperal mania, or insanity, properly so called, is a mental disorder of a very grave, not unfrequently incurable character.

During the puerperal state the mental as well as the physical conditions undergo, in many cases, important modifications. For instance, it is no very uncommon occurrence for the woman's temper to be greatly changed for the better or the worse during pregnancy. Hysterical and other nervous manifestations are quite common. In not a few cases the pregnant woman's habits and tastes are strangely modified during gestation. Mania may occur either in the progress of pregnancy, while labor is in progress, or during lactation. Insanity of this sort is developed in most cases from the third to the seventh month.

The mania occurring during lactation is observed in most cases after the sixth month of nursing. It is most frequent in women of mature years, and is specially so in those who have borne children with unusual frequency. This disorder is by no means rare. About one-tenth of all the insane women to be found in the asylums of Europe and the United States have become so in connection with pregnancy. In nearly one-half of these cases the force of hereditary predisposition may



be noted. It occurs much more frequently after severe and exhausting labors. The mothers of illegitimate children are specially liable to be attacked.

The form of insanity that occurs most frequently is that manifesting itself within two weeks after delivery, and presents symptoms of acute mania. The severity of the symptoms has induced observers to believe that the disorder of the mind is caused by inflammation of the brain, a view now proved to be erroneous. The disorder really consists of violent mental excitement without power.

*Symptoms.*—Puerperal insanity may assume the forms either of furious mania or melancholy. The symptoms presented by the puerperal forms of insanity do not differ materially from the same disorders unconnected with gestation. Still there are distinctions that render the details of a typical case interesting. We borrow from Doctor Ramsbotham the following graphic description of such a case :

“In mania there is almost always in the patient’s mind at the very commencement anxious suspicions and an unpleasing expression of face. Sometimes it is pallid, at other times more flushed than usual. An unaccustomed irritability of temper and impatience of control or contradiction is observed with vacillation of purpose or loss of memory. Sometimes a rapid succession of contradictory orders are issued, or a paroxysm of excessive anger is excited about the merest trifle. Occasionally one of the first indications will be a sullen obstinacy, listlessness, or stubborn silence. The patient lies on her back, and can by no means be persuaded to reply to the questions of her attendants, or she will repeat them as an echo, until, all at once, without any



apparent cause, she will break out into a torrent of language more or less incoherent, and her words will follow each other with surprising rapidity. These symptoms will show themselves rather suddenly on the patient's awaking from a disturbed and unrefreshing sleep, or they may supervene more slowly when she has been harassed with sleeplessness for three or four previous nights in succession, or perhaps ever since her delivery. She is very likely to become impressed with the idea that some evil has befallen her husband, or, what is more usual, her child ; that it is dead or stolen ; and if it be brought to her nothing can persuade her that the child is her own ; she supposes it to belong to somebody else. Or she may fancy her husband is unfaithful, or that those about her have conspired to poison her. Those persons who are naturally the objects of her deepest and most devout affection are regarded by her with jealousy, suspicion, and hatred. This is particularly remarkable with regard to her newly born child.

“I have known many instances where attempts have been made to destroy it when it has incautiously been left in her power. Sometimes a great anxiety may be observed regarding the termination of her own case, or a firm conviction that she is speedily about to die. I have observed upon occasions a constant movement of the lips while the mouth was shut, or the patient is incessantly rubbing the inside of her lips with her fingers, or thrusting them far back into her mouth, and if questions be asked or if she be requested to put out her tongue, she will compress her lips firmly as with an obstinate determination to resist. One peculiarity attending some cases of puerperal insanity is the immorality and obscenity of some of the expressions uttered ;



they are often such as to excite our astonishment that women in a respectable station in life could ever have become acquainted with such language.

“The condition of the pulse is always a matter of grave solicitude, and is a most important indication in connection with other symptoms. Extreme rapidity of the beats is always an indication of danger. When this is observed in the very beginning of the attack, it is all the more alarming. The milk and the lochial discharge are always scanty, and often entirely suppressed. The patient’s obstinate sleeplessness often defies the influence of the most powerful narcotics. The stomach is disordered, the tongue coated, and the breath offensive. Diarrhea is sometimes a troublesome complication, but the bowels are usually constipated. The patient may be silent or morose, but often she is loquacious, and constantly busy about something. Food may be taken freely, but it is not unfrequently refused obstinately, so that nourishment must be forcibly administered to sustain life. Many exhibit a tendency to commit suicide, evincing much ingenuity and cunning to accomplish that end.”

In those forms of insanity other than puerperal the patients usually believe that all the world is insane except themselves, but in puerperal mania there is, in many cases, a consciousness in the patient’s mind that she is laboring under a delusion which she cannot throw off. Within two or three weeks the mania gradually subsides, and is replaced by a state of dementia accompanied with a haziness of recollection resembling the awaking from a dream. The patient may now be induced to employ herself rationally. If so, ultimate recovery may be confidently expected. There are cases,



chiefly those who have an inherited taint, in which the mental delusions become confirmed. In these cases dementia of a severe character gradually supervenes, resulting finally in hopeless insanity. The progress and ultimate issue of cases of puerperal mania are subjects of grave apprehension. A fatal result is less to be dreaded than hopeless insanity. A celebrated physician, during the beginning of the present century, well remarked, "mania is more dangerous to life, melancholia to reason." Those afflicted by acute mania, who do not die, recover much more rapidly than women suffering from melancholia. When the latter do recover it is almost always very slowly, the convalescence sometimes extending over two years.

*Treatment.*—The prevention of a threatened attack of puerperal insanity is always a matter of the greatest importance, and it is a consolation to know that much may be done in this direction. When a mother has been affected at a previous confinement by any form of puerperal insanity, or by a hereditary taint, vigorous preventive measures should be inaugurated before an approaching parturition. In the majority of cases preventive treatment will not be possible, and we shall have to content ourselves with treating the disease after the symptoms have declared its nature. The disordered and loaded condition of the bowels requires prompt attention. The irritability and restlessness accompanying the disease will always be greatly relieved by clearing out thoroughly the highly offensive contents of the intestine. In some cases, after the operation of a full dose of the citrate of magnesia, some of the cathartic mineral waters or the following active preparation, the patient becomes quite rational, although so good a re-



sult cannot usually be expected from such simple treatment:

290 R. Croton oil..... 2 drops.  
 Wheat flour.....40 grains.  
 Powdered gum arabic.....10 grains.

Water enough to make the whole into a stiff dough. Divide into 16 pills. Give one pill every hour until the bowels move freely.

The heat of the head observed in such cases, which was believed by the doctors thirty or forty years ago to demand blood-letting, may be relieved much more safely and certainly by the constant application of cloths wrung out of ice water, or by the careful use of the rubber ice cap itself.

In many cases the prolonged warm bath, at a temperature of 100 to 105 degrees Fahr., is followed by very satisfactory results. After the bath the patient sometimes sinks into a sound and refreshing sleep, and awakes quite rational but very weak. If sleep cannot be procured by the above treatment, remedies of the following sort must be used, as recovery cannot be expected if the sufferer does not sleep:

291 R. Bromide of potash..... 2 drams.  
 Chloral hydrate.....1½ drams.  
 Syrup of tolu..... 2 ounces.  
 Glycerine..... 1 ounce.  
 Water to make..... 4 ounces.

One tablespoonful when sleep must be had. If no effect be observed at the end of an hour, another dose, consisting of one teaspoonful, may be given.

Chloroform may be required in full doses.



These drugs should be given only under the supervision of a skillful physician. Proper nourishment is of the utmost importance. It is a very hopeful symptom that ultimate recovery will be attained, when a patient, who at first obstinately refused food, is persuaded to take it willingly. When these sufferers cannot be induced to eat, they must be fed forcibly. Not unfrequently, patients get well after being nourished in this way for weeks. A moderate quantity of generous wine with their meals materially assists in sustaining their strength by rendering digestion more perfect.

The general management of women suffering from the mental disorder under consideration is also very important. Experience has shown it is best to have the insane woman separated from her friends, and placed in the care of an experienced nurse. While the disease is acute and the delusions strong, the sight of her near relatives often produces a notably injurious effect; but after she has begun to improve, complete recovery is sometimes hastened by an interview with her husband or other relatives. As long as there are reasonable hopes of her ultimate recovery, the treatment should be conducted at the patient's home, if possible. It is unwise to send persons suffering from a comparatively curable sort of insanity to a lunatic asylum, to associate with those whose minds are permanently deranged.

Many of these patients need constant watching to prevent them from committing suicide. After they have begun to improve, change of air and scene often exercise a notably good effect.

#### ABORTION.

The contents of the pregnant uterus may be expelled



at any time before the full period of gestation, by the operation of causes which we shall consider in their proper place.

If this accident should occur during the first few weeks of pregnancy, no unusual symptoms may be observed farther than a more copious flow at the next menstrual period. If the expected menses do not appear for a few days after the usual time, the woman may suspect herself to be pregnant; but if the discharge be only delayed, not arrested, this fact is held to account for the unusual pain and increased flow, without supposing that fecundation and the loss of the ovum had taken place within a few weeks. Miscarriages of this sort are frequent from natural and unavoidable causes; but they rarely come under the notice of medical men, and even when the difficulty occurs during the second month, the woman may get along without medical assistance.

The liability to miscarriage is undoubtedly greater during the earlier months of gestation, but the accompanying hemorrhage is rarely enough to alarm women, more especially if they be accustomed to flow freely at the menstrual periods.

It is quite different with miscarriages during the twelfth to the eighteenth week. In these cases there are special dangers to be encountered, because at this time the separation of the ovum is liable to be followed by copious, perhaps dangerous hemorrhage.

*Causes.*—The causes of miscarriage are very numerous. Some of these may be traced to the general health and temperament of the mother. It is, however, worthy of notice, that the ordinary ailments common to pregnancy, such as morning sickness, vomiting, faintness, etc., are very rarely the cause of abortions. In fact, they are



considered by many to act effectively in preventing this disaster. Still, when these disorders assume a form sufficiently severe to greatly deteriorate the woman's general health, they may result in the premature expulsion of the foetus.

Disorders such as scarlatina, diphtheria, typhoid fever and other grave affections, accompanied by high temperature, are very liable to cause abortion. Of chronic diseases, none seems to be more powerful than syphilis, which is competent to poison the uterine contents so that complete development of the ovum becomes impossible. In some cases irritation of the alimentary canal due to dyspepsia, diarrhea, dysentery, or worms, will cause the premature expulsion of the ovum. In other cases prolonged suckling, causing a debilitated condition of the system, is very effective in this direction. Blows, injuries, falls, or terror, often cause the loss of the fecundated ovum. The foetus is subject to certain diseases of which it dies, bringing about the same result.

The placenta, through which the child receives its nourishment from the mother, sometimes undergoes fatty degeneration or rupture, allowing blood to be effused into its tissue, resulting in the destruction of the child's life. The umbilical cord is also subject to various diseases, or the supply of blood necessary to the child may be cut off by the formation of knots on the cord. Some pregnant women sustain injuries from which abortion might be expected to occur, yet they entirely escape; others abort repeatedly from very trifling or without any apparent cause. In fact, some women seem to acquire the habit of abortion, rendering it very difficult for them to carry the product of conception beyond a certain point. The most frequent of all



causes is the shameful practice of criminal abortion, the statistics of which can never be written.

*Symptoms.*—These differ according to the causes and the time of gestation at which the loss of the ovum occurs. One of the most constant symptoms is pain. In very early miscarriages this may be no more severe than frequently attends an ordinary menstrual period. A trifling increase of the pain and of the discharge may be the only symptoms that excite suspicion. More notable symptoms signalize the event at an advanced period of gestation. There may be a chill, followed by fever, frequency of the pulse, thirst, restlessness, and sometimes nausea and vomiting. Other premonitory symptoms are occasionally observed, as palpitation of the heart, dimness of the vision, coldness of the hands and feet, and a cold, uneasy feeling about the lower part of the abdomen. Pain in the back and irritation of the bladder often add to the woman's discomfort. If she has been annoyed by morning sickness and other disagreeable symptoms accompanying pregnancy, they cease; the breasts shrink notably. If the pain be not checked it becomes recurrent, marked by distinct intervals, due to uterine contraction, the organ endeavoring to expel its contents. The pains will now be accompanied by more or less hemorrhage, depending on the extent to which the attachments of the ovum have been separated from the womb.

In early gestation there is sometimes much difficulty in distinguishing between a miscarriage and delayed menstruation. The following signs will, however, enable us to determine the point with much certainty. If a miscarriage be in progress, the mouth of the uterus is more or less open. Hemorrhage precedes the pains,



and affords them no relief; on the contrary, these become more severe as the case advances. But if it be a case of delayed menstruation, the mouth of the uterus will be nearly closed; the pains precede the flow of blood and are relieved thereby, and often cease entirely as soon as the flow is established.

As the case progresses, the uterine contractions become more severe, the mouth of the uterus enlarges; but often does so very slowly, because the parts are not prepared for dilatation so completely as they are at the end of pregnancy. In early miscarriages the ovum is usually expelled entire: nothing remaining in the uterus to cause irritation. This fact explains the comparatively harmless effects usually observed when abortion takes place at an early period of gestation.

When the membranes rupture, the foetus is expelled through the opening to be followed subsequently by the after-birth and membranes. Or the latter may be retained and give rise to serious, perhaps very dangerous hemorrhage.

The foetus is usually dead when it is expelled, but it is sometimes alive and may move actively several hours after birth. Sometimes it dies many days before premature labor is excited.

It is very important to distinguish between the symptoms by which an impending miscarriage is known to be inevitable, and those which show it to be amenable to treatment. The loss of the ovum is seldom inevitable, unless it be dead. Nothing will justify us in abandoning all efforts to save it unless we have proof that life must be extinct. The amount of hemorrhage is a tolerably sure indication of the extent the uterine contents have been injured by their separation from the womb.



Profuse loss of blood recurring at intervals, accompanied with paleness of countenance, vomiting and faintness, are symptoms of the gravest import. The proper weighing of symptoms is a grave responsibility. If the ovum can be saved, every effort should be put forth to do so. When it cannot be saved, it is our duty to favor its expulsion. One of the worst indications possible is the rupture of the membranes and the discharge of the water. If this be accompanied with dilatation of the mouth of the womb and profuse hemorrhage, all hope of preventing the miscarriage must be abandoned.

At the natural termination of gestation, the placenta becomes ripe, separates from the uterus, and is expelled after labor without difficulty; but in miscarriages the after-birth is more adherent, and often remains firmly attached to the womb after the removal of the foetus. The expulsive pains may cease, the mouth of the womb close, and the woman imagine the delivery to be complete. But after a time, occasionally several days, the pains return, caused by the uterine efforts to rid itself of its now foreign contents. This process is usually attended by copious, often alarming hemorrhage. The flow of blood rarely ceases until the uterine contents have been expelled, and complete, permanent contraction of the womb has been secured.

If the placenta remains a sufficient length of time, it undergoes putrefactive changes, giving rise to dark and fetid discharges. Many days may be occupied in discharging the placenta bit by bit, during which time blood-poisoning is very apt to occur by the absorption into the general circulation of putrid fluids through the uterine veins. In case of miscarriage, it is very im-



portant that all clots of blood and other solid matters which escape from the maternal passages should be carefully preserved for examination; by this means we can determine positively whether the ovum has been completely expelled, and what further treatment, if any be necessary.

*Treatment.*—The first point to be determined—is the patient really threatened with a miscarriage? If she be, the treatment resolves into two divisions: either the prevention of the miscarriage, if that be possible; if not, the diligent use of those measures by which the suffering woman can be conducted safely through the dangers incident to her condition. In the cases of women who have contracted the habit of aborting, the treatment should be preventive, and to be successful must be commenced long before any premonitory symptoms of abortion are manifested. The causes that formerly forced her to lose the ovum must be investigated, and the patient directed to avoid these when possible. In many cases women shed the product of conception at the same period of several successive pregnancies. Our object in the treatment of such cases should be to tide over safely the period at which the miscarriages have usually occurred. When we can do this everything will often go well until the completion of the full term. If we can only succeed in our first attempt in breaking up the habit of abortion so that the loss of the ovum may be deferred from the third to the sixth month, we may, by the use of the same course of treatment, secure the most favorable results during a subsequent pregnancy. Avoidance of undue exertion during the early months is a matter of the utmost importance. In the worst cases, in whom the habit of abortion seems to be



established, confinement to bed for several weeks before and after the period at which the miscarriages formerly occurred, and may be again expected is essential to success. All excitement of the emotions or passions should be carefully avoided. A careful inquiry should be made into all the circumstances attending former miscarriages. The patient should be cautioned against the effects of wearing heavy skirts and tight lacing. We have good reasons for believing that the morning sickness, which almost always attends gestation during the early months, serves a very useful purpose in preventing abortion by acting as a sort of counter-irritant to the excited generative system, and effectively allaying uterine irritability. In the cases of pregnant women who abort habitually, and who never suffer from nausea and vomiting during gestation, the following prescription is often successful in preventing an expected abortion by artificially exciting these symptoms :

292 R. Powdered ipecacuanha.....10 grains.  
Powdered white sugar..... 1 dram.

Triturate the ingredients together in a mortar. Divide into 20 powders. Take one powder in water every morning before getting out of bed. The dose may be increased or diminished to meet the necessities of the case, the object being to cause a moderate amount of nausea but not vomiting.

There are some scientists of high repute who hold that a superabundance of carbonic acid in the blood is a powerful means of bringing on premature uterine contraction. Pregnant women who inhabit close, ill-ventilated rooms are therefore said to be specially liable to miscarry. Attempts have been made to introduce oxygen



into the system by administering nitric acid or chlorate of potash internally, but the most effective way to rid the blood of an undue quantity of carbonic acid, and to supply it with oxygen, is to place the patient in a pure atmosphere day and night.

In attempting to prevent a threatened attack our efforts must first be directed toward allaying uterine irritation and contraction, for if the womb continues to contract on its contents the latter are sure to be expelled. The most perfect quiet, both of body and mind, is absolutely essential to success. All known sources of irritation should be removed as far as possible. The patient should lie on her back on a hard bed, and be kept as cool as may be consistent with her comfort. Change of position should be avoided as much as possible, because slight exertion often notably increases the hemorrhage. The patient's food should be light, digestible, and taken cold. Stimulants of all kinds and solid animal food are inadmissible. Opium is the most effective remedy for allaying the contractile efforts of the womb. Prescription 293 is a very valuable compound for this purpose :

293 R. McMunn's elixir of opium.....	1 ounce.
Sulphuric ether.....	3 drams.
Syrup of tolu.....	2 ounces.
Water to make .....	3½ ounces.

One teaspoonful is the usual dose. Another dose may be given at the end of an hour if the first dose does not relieve.

The quieting effect of the preceding preparation is quite as certain to be secured, and it is safer when given in small doses. These may be repeated at inter-



vals of about one hour until the pains be controlled. It agrees better with the stomach and the nervous system than any other preparation of opium of which we have any knowledge. If the patient be suffering from nausea it may be necessary to give the above anodyne through the rectum to avoid offending the stomach by offering a remedy it cannot retain.

The quieting effects of the opiate on the uterus are quite as satisfactory when given by the rectum as when it is introduced into the system by the mouth.

As long as we are not certain the foetus is dead we should act as if we were sure it is alive, and spare no means calculated to prevent its expulsion.

When there are profuse hemorrhages with severe and increasing pains accompanied by rupture of the membranes, discharge of the liquor amnii, and dilatation of the neck of the womb, we are forced to the conclusion that the foetus cannot be saved, and it becomes our duty to favor its expulsion as soon as possible to save the mother's life.

If the ovum be protruding from the dilated mouth of the womb it may be hooked down with the finger or a polypus forceps, and removed with perfect safety.

When copious hemorrhage occurs during a threatened abortion while the mouth of the uterus is not dilated enough to permit the expulsion of the ovum, a piece of soft sponge dipped in vinegar and squeezed nearly dry may be effectively used to stay the loss of blood; it should be placed against the neck of the womb and allowed to remain for ten or twelve hours. The blood that first flows into the interstices of the sponge is rapidly coagulated by the vinegar, and soon forms a solid barrier sufficiently firm to prevent further



hemorrhage. If it be considered desirable to remove the sponge to ascertain how matters are progressing, we are at liberty to do so. When the requisite information has been obtained it should be cleansed, dipped anew in vinegar, and replaced against the mouth of the womb if the flow of blood continues, and the uterine mouth be still too small to permit the escape of the ovum. The sponge tampon should, however, be used with caution as long as there is any hope of saving the ovum, because it sometimes increases the irritability of the uterus, an effect we desire to avoid in all such cases. Nor should it be used in impending abortions after the third month of gestation without great caution, as the womb is then large enough to contain an immense quantity of blood. By using the sponge tampon in this way injudiciously we simply convert an external into an internal hemorrhage. The latter being concealed is more dangerous than the former.

The placenta becomes fully developed about the end of the third month, and forms at that time a very intimate anatomical connection with the inside of the womb; therefore its separation before the normal termination of gestation cannot usually be effected without much hemorrhage, as the placenta is then firmly adherent to the inside of the uterus and has not undergone the changes which favor its separation at the end of gestation: the removal of the after-birth, without undue loss of blood, is always a subject of anxious consideration. To get it and the membranes away before decomposition occurs is very important, and if they can be removed without undue violence no time should be lost in doing so after the expulsion of the foetus. But if the uterus cannot be readily emptied there is no dan-



ger in waiting a day or two (provided there is little or no hemorrhage) in the hope that the after-birth may separate spontaneously in the interval from and be expelled by the womb. If the ovum be protruding from the uterus gentle efforts may be made to extract it, but they should be gentle, otherwise a piece of the placenta may be torn off, by which accident the hemorrhage may be largely increased and the removal of the remainder rendered more difficult.

In some rare cases the after-birth may remain in the uterus and become organized, forming a sort of placental polypus. But in the great majority of cases it speedily undergoes putrefactive decomposition. If this occurs it will be manifested by the escape from the uterus of a fetid fluid and the occurrence in the mother of symptoms due to blood-poisoning, with fever. Under these circumstances no time should be lost in dilating the womb artificially and removing the putrid mass. If hemorrhage should occur after the supposed removal of the after-birth it is a tolerably sure sign that some portion, however small, still remains, and its prompt extraction is demanded. The flow of blood will not cease till this be done.

It is often very difficult to persuade women who have suffered miscarriages to take proper care of themselves afterward. When the mishap has occurred at an early period of gestation and everything has gone on properly, a few days' confinement to bed and the avoidance of fatigue for several weeks afterward will secure excellent results. In neglecting suitable precautions both present and permanent injury is often caused by the development of chronic uterine diseases, sometimes of an incurable character.



## HEMORRHAGE AFTER DELIVERY.

Copious hemorrhage after delivery would certainly occur from the immense number of open blood-vessels that then exist on the inside of the womb, at that part from which the placenta has been removed, if nature did not take effective means to prevent this disaster.

In the course of an auspicious labor, when everything has gone on in the most satisfactory manner until the birth of the child, we have good grounds to believe the case will terminate happily. But sometimes Nature is at fault at the critical moment, and, if the physician be not on the alert and fully competent to meet the emergency, the lying-in room may be quickly converted into a scene of death. Occasionally the tonic uterine contraction that should close the gaping blood-vessels is relaxed, and the mother's life-blood pours from their open mouths in so impetuous a torrent that an exhausting or even fatal hemorrhage may take place in a few moments. So copious may the flow be, that the mother sometimes perishes before effective means can be taken to stay the torrent of blood.

*Causes.*—In some cases post-partum hemorrhage is due to ignorance or inattention on the part of the physician at the critical moment. But there are dangerous conditions against which human skill and foresight avail very little.

It is frequently observed that very delicate women are capable of surprising feats of strength under great temporary excitement, but after the occasion has passed they sink into a condition of total prostration. In much the same way the womb is usually quite competent to discharge its onerous duties during labor up to the close of parturition, but as soon as the struggle is over



it sometimes sinks into a condition of inanition known as uterine inertia, and becomes incompetent, from exhaustion, to set up or continue that tonic uterine contraction by which alone the gaping blood-vessels can be effectively sealed.

There is an immense difference between the size of the womb at the beginning of labor and after the placenta has been expelled. The uterine muscular fibres require time to contract to the enormous extent that is essential to close the vessels effectually.

Unusually rapid labors do not afford the uterine muscular fibres time to bring about the requisite tonic contraction, and thus become a fruitful cause of hemorrhage after delivery.

Uterine polypi, either of the hard or softer varieties, are very apt to cause exhausting hemorrhage after labor, if they do not cause premature expulsion of the uterine contents. They do this either by pouring blood from their own surfaces, or by mechanically preventing the proper closure of the lacerated vessels. Inversion of the womb, or turning of the organ inside out, is, for obvious reasons, a fruitful cause of hemorrhage.

*Symptoms.*—Post-partum hemorrhage may be either internal or external; in the former variety the blood escapes from the ruptured vessels into the dilated womb, and is retained there either by the woman's position or perhaps by a clot of blood or a bit of placenta closing the exit. In the external variety of hemorrhage the vital fluid pours from the vagina as rapidly as it flows into the uterus. The constitutional symptoms of both sorts of hemorrhage are alike, because when the mother's blood has once escaped from the vessels it is as much lost to her when it fills the dilated womb as if it were



spilt on the ground. In those cases in which complete uterine inertia exists, appalling symptoms are rapidly developed. In a very few moments the hemorrhage may be so abundant as to cause profound faintings, bringing the mother to the brink of the grave. If the hemorrhage be less rapid, the woman simply becomes pale, with a feeling of faintness. In severe cases the vision becomes dim, the skin and extremities cold and covered by a clammy perspiration, the pulse small and rapid or perhaps imperceptible, and the paleness ghastly. The quantity of blood appearing externally is not a safe indication of the amount lost or of the danger. Although the external hemorrhage may be moderate, the internal may be much greater. Some persons bear loss of blood much better than others. A hemorrhage that would be fatal to one person is borne with comparative safety by another; therefore, in estimating the danger, we should rely more on the general symptoms manifested by the patient than on the actual amount of blood lost. It should not be forgotten that every case of labor is accompanied in the third stage by a certain amount of hemorrhage. In some cases this is considerable, without producing any alarming symptoms. A gush of liquor amnii, colored with blood, which often immediately follows delivery, may lead to the belief that copious hemorrhage is taking place, causing needless alarm and the use of unnecessarily energetic treatment.

*Treatment.*—No greater emergency can arise in the parturient room than the occurrence of post-partum hemorrhage. There is no time for consultation with other medical men, or for reference to books. The physician must be competent to deal with the difficulty



instantly and effectively, if his patient's life is to be saved. There is no difficulty in which an ounce of prevention is better worth a pound of cure, than in that under consideration. Therefore, every labor should be conducted throughout with a view to obviate any undue loss of blood at its completion. The labor may be retarded, if it is likely to be precipitate, or its progress may be promoted, when it is so slow as to prematurely exhaust the uterine power. Sometimes hemorrhage occurs after the uterus has contracted, by subsequently relaxing. If the medical attendant be careful to observe the behavior of the uterus during the second stage of labor, and stimulates it to contract properly by pressure and manipulation applied to the fundus, dangerous hemorrhage at the completion of parturition would be a rare complication. The physician should always remain with his patient at least one hour after delivery, to be on hand should any accident occur.

The following remedy, when given as the second stage is almost completed, is a very effective means of securing permanent uterine contraction, and preventing hemorrhage :

294 R. Fluid extract ergot..... 1 ounce.  
Half to one teaspoonful in water.

But if, in spite of all precautions, uterine relaxation should permit undue hemorrhage to occur, the mother's abdomen may be quickly uncovered, and a quantity of cold water poured thereon from a height of three or four feet ; or a piece of ice may be rubbed over the lower part of the abdomen. Electricity, compression of the aorta, the injection of hot water into the vagina, and many other methods, have been devised for controlling post-partum hemorrhage ; these means are all useful in



certain cases. But if the preventive measures laid down in this chapter are skillfully used, curative treatment will be very rarely required.

#### ACCIDENTAL HEMORRHAGE.

During the last three or four months of pregnancy, the placenta undergoes changes of structure, by which it becomes, as it were, ripe, and its attachment to the underlying intervening surface enfeebled, preparatory to its easy and complete separation at the time of delivery. When we consider that the womb itself and its contents grows steadily heavier, and the attachment of the after-birth more friable, we are surprised that partial separation does not occur during gestation more frequently.

The variety of hemorrhage under consideration is caused by premature separation of a portion of the placenta from the uterus.

*Causes.*—This difficulty rarely occurs in young and vigorous women, but it is much more frequent in the debilitated, and in those who have borne many children, particularly if the births have occurred in quick succession. These circumstances increase the difficulty of dealing with such cases successfully. The obscurity that surrounds them is often increased by the fact that occasionally enough blood escapes from the mother's veins into the womb to cause severe symptoms, without the appearance of one drop of blood externally. In such cases the effused blood lodges between the uterine wall and the bag of water—sometimes it does so in such quantities that rupture of the uterus has been caused; a result which, however, could not have taken place if the walls of the womb had not been greatly weakened by degenerative disease, probably of a fatty character.



In some rare cases the placenta has adhered firmly to the womb all around the margin, while the central portions are separated from the uterus and bulged into the uterine cavity, filled by a large quantity of blood. Under these circumstances, all the symptoms of profuse hemorrhage may be rapidly developed. In these cases, nausea, death-like paleness, dimness of vision, and profound prostration, are observed before any blood escapes externally, because all the blood that flows from the mother's vessels is retained in the womb by the placenta. This variety is properly called concealed hemorrhage. A careful observance of the symptoms will enable us to distinguish between unavoidable and accidental hemorrhage. In the former variety the flow of blood is increased during the pains, because the placenta is still farther separated from the womb by its contractions. But in the latter the hemorrhage is stayed during the pains, because they force the child's head down upon the part from which the blood flows.

*Treatment.*—Accidental hemorrhage may occur either before or during parturition. In cases occurring before labor, when the flow of blood is moderate, we should endeavor to stop it so that the gestation may go on to the full time. Perfect quiet is a matter of the utmost importance. As soon as the hemorrhage occurs the patient should be sent to bed. She should not be allowed to raise her head from the pillow, much less to get up for any purpose whatever. Cold acid drinks should be given freely. The following preparations are very useful and palatable :

295 R. Strong, chemically pure hydrochloric acid.....1 dram.  
 Sugar..... $\frac{1}{2}$  ounce.  
 Water.....1 pint.



Dissolve the sugar in the water and add the acid.  
The mixture may be drank freely.

296 R. Strong, chemically pure nitric acid.....75 minims.  
Sugar.....1½ ounce.  
Water..... 2 pints.

Dissolve the sugar in the water and add the acid.  
The mixture may be drank freely.

297 R. Strong, chemically pure nitro-hydrochloric acid.70 minims.  
Sugar..... 1 ounce.  
Water.....1½ pint.

Dissolve the sugar in the water and add the acid.  
The mixture may be drank freely. These mixtures  
should be made and kept in glass or porcelain vessels,  
not in metal vessels of any sort.

The loss of a considerable amount of blood by the patient should not discourage us in persevering in our efforts to control it. Not unfrequently this can be accomplished after large quantities of blood have been lost. No rule can be laid down by which we can be guided in all cases, because the quantity of blood that different individuals can lose without serious injury, varies very greatly. While the womb is filled by the foetus and the liquor amnii, the membranes being intact, the vaginal plug may be used effectively in restraining the loss of blood. But after the rupture of the bag of waters and the escape of the latter, it should never be used, because the womb is then large enough to contain sufficient blood to seriously endanger, perhaps destroy both the mother and her child. Under these circumstances labor should be hastened as rapidly as may be consistent with safety.



But the mother's danger does not necessarily terminate with her delivery. She is perfectly safe from further hemorrhage only when the after-birth has been expelled, and the uterus has contracted firmly on the blood vessels.

When labor has been preceded and accompanied by copious accidental hemorrhage, the patient is often so prostrated that the womb fails to contract properly after the struggle is over, or relaxes after having contracted. This disaster should be guarded against by unceasing vigilance in observing the action of the womb during the conclusion of the second stage of labor, and by administering to the patient a dose of the following prescription when the parturient struggle is very nearly completed :

298 R. Fluid extract ergot .....1 ounce.  
 Bromide of potash.....2 drams.  
 Glycerine .....1 ounce.

Triturate the potash with the glycerine in a mortar, add the ergot, and give one or two teaspoonfuls at the time above mentioned.

After the uterus has been made to contract firmly by the means we have indicated, the uterine contraction may be maintained by the application of a firm bandage in the usual way, having between it and the fundus of the womb a folded towel, so placed as to maintain gentle but constant pressure on the uterus.

#### UNAVOIDABLE HEMORRHAGE.

We have already described the occurrence of hemorrhage after delivery. The subject under consideration is of a similar but much graver character, con-



sisting of loss of blood from the uterus before labor, which no human foresight nor skill can prevent altogether. The very best results to be obtained by the most skillful treatment are to keep the loss of blood within the limits of safety to mother and child. After the very best has been done, the life of the latter has sometimes to be abandoned, to enable us to render that of the mother more secure.

The after-birth is not developed so as to be of any practical use until the second month of gestation; during the third month its structure is completed, and at that time it enters fully on the discharge of its important functions. The placenta is attached at whatever part of the womb the impregnated ovum first fastens itself on its arrival in the uterus. In the vast majority of cases this occurs most fortunately at the upper part, where it ought always to take root. But sometimes it is attached so much farther down that the edge of the after-birth approaches or perhaps covers the opening in the neck of the womb through which the child must pass at birth. This mal-implantation is technically known as *placenta previa*. Only a small part of the placental edge may be placed over the opening, or it may be implanted over it center on center.

This peculiar situation of the placenta necessarily involves its partial detachment from the uterine surface with which it is in contact during the latter months of pregnancy, when the lower segment of the organ undergoes the enlargement which occurs during that time. Or if the elasticity of the tissues prevents hemorrhage until the time of delivery, which is very rare, the dilatation of the neck of the womb during the first stage of labor tears the placenta and detaches it from the womb.



In either case the hemorrhage from the lacerated vessels is truly unavoidable, as it is impossible for the child to be born without hemorrhage, often of the most alarming sort.

Nagele, an eminent German accoucher, says, "There is no error in Nature to be compared to this, for the very action she uses to bring the child into the world is that by which she may destroy both it and the mother."

It was erroneously believed down to a comparatively late period, that in placenta previa the after-birth was originally implanted higher up in the uterus, but that it slipped down during pregnancy to where it was found at the time the hemorrhage occurred which drew attention to it. So gross an error has long been exploded by the advances of modern obstetric science.

*Causes.*—The fecundation of the human ovum is generally believed to take place in the ovaries from which it is conducted by the Fallopian tubes to the uterus. The journey is believed to occupy about eight days, during which very important changes take place in the impregnated ovum. At the same time the mucous membrane of the womb has become softened and thickened, being thus prepared for the reception and nutrition of the little stranger as well as to arrest and fix the moving ovum as soon or shortly after it arrives in the womb. Exceptional circumstances may occur, concerning the exact nature of which very little is known, to permit the descent of the ovum down to the neck of the womb, where it occasionally takes root and undergoes development, causing the grave difficulty under consideration.

*Symptoms.*—In early pregnancy placenta previa presents no symptoms by which it can be recognized. If



hemorrhage should occur from this cause in any case of gestation during the first three months, abortion would be very likely to take place. A sudden attack of hemorrhage, occurring after the sixth month without any assignable cause, should always arouse suspicion. The more advanced the pregnancy, the more profuse the hemorrhage is likely to be; and if it occurs at uncertain intervals, while the woman is at rest or perhaps during sleep, the symptoms point significantly to the existence of a condition of things within the womb likely to lead to unavoidable hemorrhage and necessitates a very careful examination. In such cases the neck of the womb will be found much thicker, softer and more doughy than usual—a condition caused by the large number of blood-vessels passing through the part to supply the circulation flowing into the placenta attached to it. If the neck of the uterus be open wide enough the placenta may often be felt by gently examining the parts with the finger. Sometimes the detached surface from which the preceding hemorrhages have proceeded may be detected by this means.

In those cases in which no hemorrhage is observed until the advent of labor the sudden gush of blood which then occurs is sometimes so fearful as to cause immediately deep fainting or perhaps a fatal result before assistance can be had.

Moderate hemorrhage, taking place before labor, has the advantage of directing attention to the true nature of the difficulty, and enables us to adopt precautionary measures, with the intention of diminishing the patient's danger. Each successive contraction of the womb still farther separates the placenta from its attachment and increases the flow of blood, so that, when these cases



are not skillfully treated, a fatal result almost uniformly follows.

Sometimes the uterine contractions are so powerful that the presenting part of the child has been forced completely through the placenta. In others the after-birth has become detached from the womb by uterine action exclusively. Such terminations of placenta pre-via are rare, and, when they do occur, the child is necessarily sacrificed, although the mother will probably do well, as the loss of blood cannot, under these circumstances, be very copious. The unaided efforts of Nature may be trusted to attain favorable results when the edge of the placenta only approaches the internal mouth of the womb, or when this opening is not covered by the thickest part of the after-birth; but, when the latter condition obtains, the most skillful treatment is required.

*Treatment.*—The loss of blood from mal-implantation of the placenta is caused by its separation from the womb and the necessary laceration of the blood-vessels passing between the former and the latter. When symptoms of unavoidable hemorrhage are manifested in early pregnancy the case may very readily be mistaken, at first, for a threatened abortion; which error, fortunately, is of very little consequence, as the treatment of both difficulties at this early period of gestation is almost or quite identical. Rest is of the utmost importance: the patient should not be allowed to raise her head or shoulders from the pillow for any purpose whatever, and as little motion of the remainder of the body permitted as possible. Cathartics should not be used to move the bowels—the latter are best let alone for the first few days; but if it be necessary to the woman's comfort, the calls of Nature may be aided by



enemas of water, slippery-elm mucilage, or thin boiled starch. Undue straining should be carefully avoided. The food must be of the blandest possible character; milk diet, taken cold, is excellent. While we are trying to control the hemorrhage by these means stimulants of all kinds must be strictly forbidden. All the measures we have indicated, however diligently employed, sometimes fail. If the hemorrhage be copious during the early months, before the child is capable of an independent existence, it is usually best to deliver the woman before her life be sacrificed by hemorrhage. When the end of pregnancy has nearly arrived, before any loss of blood has occurred to render the nature of the difficulty clear, or if the loss of blood is not very copious, it is right to delay delivery, as long as may be consistent with the mother's safety, in order to give the child the best possible chance for its life. But the difficulty and danger of carrying out this policy consists in the fact that no human skill or experience can enable any one to predict, in any given case, that the flow of blood may not become dangerously, perhaps fatally copious, suddenly and without warning.

The woman's life is therefore in constant danger and may be lost by hemorrhage before help can be obtained. In order to guard against this disastrous contingency, while we are waiting for the completion of gestation, we should be very careful to have a skillful nurse at all times beside the patient, with suitable materials at hand to plug the vagina at any moment. When this operation is properly performed, either by the use of a sponge dipped in strong vinegar or with pieces of old linen or muslin, the flow of blood will be arrested for the time being, allowing opportunity to deliberate concerning



farther treatment. The vaginal plug must not be used as long as the flow of blood is trifling and there is hope of saving the child's life, because, as the plug must necessarily compress the neck of the womb and the placenta attached thereto against whatever part of the child may be lowest down, uterine contractions are very likely to be excited and labor possibly induced prematurely. But when labor has evidently commenced, and hemorrhage requires to be stayed while the mouth of the womb dilates, the plug used as we have indicated affords a double advantage both in controlling the loss of blood and in stimulating the uterus to more powerful contractions, by which labor will be hastened.

The vaginal plug is therefore a very valuable temporary expedient when properly employed.

In some cases the most effective method of staying the hemorrhage and dilating the mouth of the womb at the same time, as rapidly as may be desirable, is by the use of Molesworth's climax uterine dilator, which consists of elongated rubber bags of various sizes, having a small force-pump attached to them by which they can be distended with ice-water or air to any desirable extent.

After the uterus has been sufficiently dilated it remains to be decided whether any farther interference with or assistance to Nature's operations be required. To determine these delicate questions and act successfully on the decision usually requires the highest medical skill and experience.

#### MILK LEG.—PHLEGMASIA DOLENS.

This disease consists of a white, tense, hot, painful swelling occurring in either or both legs, most fre-



quently in the left. It occurs sometimes in women after having given birth to the first child, but it more frequently follows subsequent deliveries. Women of a delicate constitution are more liable to attacks, especially if any uterine irritation exist at delivery or subsequently. After occurring once, it is very apt to do so at the termination of a subsequent gestation; but does so, if at all, in a milder form. Although milk leg is associated in the great majority of cases with parturition, this is not always the case. Sometimes it occurs in women who have never been pregnant and is occasionally observed in men. When it follows delivery the first symptoms are commonly manifested from the fifth to the fifteenth day afterward, but they may be developed either earlier or later.

*Causes.*—There are a number of affections with which it is occasionally associated that probably have some influence in the causation. For instance, women who have been exhausted by copious hemorrhages, either before, during or after labor, are specially liable to it. Milk leg is very apt to occur after abortion, particularly if any portion of the placenta or membranes have been left in the uterus. The removal of uterine polypi or fibrous tumors and the operation of cutting stones out of the bladder have given rise to attacks. These causes are, however, only operative when there exists at the same time a peculiarly disordered condition of the blood which favors or gives rise to inflammation of the veins of the affected limb. This condition constitutes the essence of the disease according to the latest authorities.

*Symptoms.*—Sometimes the attack is so mild that there is difficulty in distinguishing it from a simple



case of local dropsy. Before the appearance of any local disorder the patient often becomes very irritable, despondent, and weak without any apparent cause. The disorder is usually ushered in with a rigor, and fever always precedes the local symptoms. Pain is often first felt in the calf of the leg; sometimes, however, it is observed around the brim of the pelvis, in the groin of the affected side, or in the hip joint. Wherever the pain may be first manifested it soon spreads to the whole leg accompanied by the characteristic swelling, giving the limb a white, glazed, and enormously enlarged appearance. The skin is as elastic and tight as a drum head, and the flesh does not pit on pressure. There is a total loss of muscular power, the limb lying stiff and motionless. The inflamed veins can often be felt under the skin like hard, round cords. The lochial discharge is always diminished if not completely arrested. If the usual flow continues it is often intolerably fetid. The milk commonly ceases to be secreted. The pulse is small and feeble, the tongue white and moist, the complexion pale and waxy, the urine turbid with abundant deposits on standing. Perspirations are frequent and profuse. The patient is restless, sleepless, and suffers from thirst. As the disease is seldom fatal, all the symptoms commonly undergo improvement after a certain period which varies considerably in different cases according to the severity of the attack. The pulse falls, the pain is relieved, and the local swelling diminishes, the leg is no longer elastic, but readily pits on pressure as in simple dropsy. But the limb regains its natural size and muscular power slowly. In some rare cases suppuration occurs which, when extensive, is likely to lead to fatal results.



*Treatment.*—As the disease under consideration follows a condition of debility and exhaustion, treatment having a tendency to reduce the patient's strength should not be adopted. Perfect cleanliness is a matter of very great importance. The uterus and the genital canal should be washed out daily with either of the following lotions by which they will be rendered perfectly antiseptic :

299 R. Strong carbolic acid.....2 drams.  
Warm water.....2 quarts.

Dissolve the acid in the water, and use the whole for one injection.

300 R. Solution of chlorinated soda.....1 ounce.  
Warm water.....1 quart.

Mix the solution of soda in the water by stirring, and use the whole for one injection.

301 R. Girondin disinfecting fluid.....2 ounces.  
Warm water.....1 quart.

For one injection.

When the inside of the womb is washed out it is of the utmost importance to see that the mouth of the uterus be dilated so as to allow the injected fluid to return immediately, or it might flow through the Fallopian tubes into the peritoneum. The bowels should be moved gently by moderate doses of the citrate of magnesia. Or if the patient be very weak an enema of salt water, slippery elm bark mucilage, thin boiled starch, or of Castile soap suds ; any of these will act safely and effectively. The diet of such patients should be generous from the first appearance of the disease ; milk, egg nog, chicken broth, strong beef essence, and similar nutritious articles of diet should be allowed liberally.



A little generous wine, given with the food, assists materially in promoting digestion, and in sustaining the strength.

The diseased limb should be fomented with flannels wrung out of hot water ; better results may be secured by sprinkling the surface of the hot cloths freely with spirits of turpentine before applying them to the limb. If the pain be very severe, laudanum may be used on the fomentations instead of the spirits of turpentine. After the swelling of the leg begins to yield and gives place to a condition in which the flesh pits on pressure, bandages applied from the toes to the hips will do much to reduce the swelling. The bandages should be of flannel at first, and must not be applied too firmly, otherwise arrest of the circulation and sloughing of the tissues may be caused. When the swelling begins to yield roller bandages of muslin applied more firmly may be used very effectively. Before the hardened plugs of blood, by which many of the veins were obstructed during the acute stage of the disease, have all been melted down, and the resulting debris eliminated from the blood, rubbing of the leg must be avoided, because this treatment is very apt to dislodge solid coagula, and cause them to float onward in the blood current until they become arrested in some smaller vessel, thus cutting off the circulation to the part supplied by such vessel, and causing very grave, perhaps fatal consequences.

But after the coagula have all been removed from the veins by liquefaction, the limb may be reduced to its original size and strengthened by a course of movement cure rubbing faster and more surely than by any other medical treatment whatever.



As some of the veins may have been permanently obliterated so that no blood flows through them, the return circulation will be obstructed for a time until the remaining channels enlarge ; before that occurs the maimed leg is apt to swell when used too freely, if so, a closely fitting elastic stocking will do much to prevent it.

#### SPURIOUS PREGNANCY—PSEUDO-CYESIS.

This curious disorder is by no means rare. A great many of the milder cases never come under the observation of any physician, as they pass away without treatment. Although this affection occurs most frequently among married women, it is observed sometimes in virgins. Spurious pregnancy was well known two thousand years ago, but in later times it was almost entirely forgotten that such a disease ever existed. Attacks may be observed at any time during the child-bearing period, but it is probably most frequent during the first year after marriage. Young wives often present some of the early symptoms of pregnancy which instead of increasing as in genuine gestation, after a time diminish and finally disappear without the occurrence of any miscarriage, proving conclusively that they were not really pregnant. Sometimes it occurs between two real pregnancies. The disorder is not confined to the human species, but is observed not unfrequently in hens, pigeons, bitches and cows.

Married ladies affected by spurious pregnancy have been so far deceived by what they regarded as unmistakable symptoms of conception, that they have been known to order a complete stock of baby clothes, engage a nurse, notify their regular medical attendant,



and put themselves to much inconvenience and expense in expectation of an approaching confinement, which could not occur, as gestation was not in progress. Ladies affected with pseudo-cyesis sometimes continue to nurse the delusion that they are really pregnant for months and even years after the natural duration of pregnancy has passed.

Not only does false pregnancy exist, but it sometimes comes to a termination by false labor, either natural or simulating difficult labors, requiring the use of instruments. The ordinary symptoms of approaching labor are manifested in these cases; the pains are at first irregular and moderate, resembling in every respect the pains characteristic of the first stage, and they gradually change into the regular, strong, expulsive pains of the second stage.

The resemblance is sometimes so complete that medical men of experience have been deceived into waiting on ladies in spurious labor for many hours, or even days, and have finally called a consultation to determine what operation was needed to deliver the suffering lady in her apparently difficult case. The symptoms of parturition may recur again and again, always proving futile, yet the deluded woman may cling to the hope that she is in the family way. Sometimes the doctor will partly convince her she is in error, but after a few days or weeks she may return to him, or perchance consult another physician, as firm in her belief as ever.

*Symptoms.*—It is not always easy even for a skilled observer to distinguish a case of spurious from real pregnancy, because nearly all the signs and symptoms may be present in the former that are usually characteristic of the latter. The breasts may be enlarged,



tender, and secrete a milky-looking fluid, the areola around the nipple becomes darker, the menses irregular or altogether absent, the abdomen enlarged, morning-sickness may be moderate or very severe, accompanied by vomiting. After a time the patient feels peculiar sensations in the abdomen which she declares to be genuine quickening. Although all the symptoms of true gestation may be present in the false variety, there are always discrepancies in the order or method of their occurrence. The menses may be entirely suppressed, but in most cases there is an irregular discharge of blood. The sensations of quickening are different from those due to the motions of a living child, and they are moreover usually observed too soon after the suppression of the menses to be genuine. The abdomen may be considerably enlarged before the menstrual discharge has ceased two months, or perhaps while it continues to appear with more or less regularity.

Mothers who have borne many children have frequently informed us that their sensations and experience during each pregnancy differed notably in many respects from every other. Yet there are often marked peculiarities that accompany every gestation. It is a very singular and interesting fact that not only are the usual symptoms of real pregnancy reproduced with great minuteness during false pregnancy, but there are individual peculiarities sometimes accompanying true gestations that are faithfully reproduced during the progress of the spurious variety of pregnancy. Some women are subject during gestation to peculiar discolorations of the skin, to neuralgias or salivation, and others to most remarkable changes of temper and hab-



its. When such women happen to be affected by spurious gestation these individual peculiarities are very apt to be reproduced with great fidelity, and thus do much to deceive both the patient and her medical adviser.

*Diagnosis.*—During a real pregnancy, after the abdomen has been considerably enlarged by the development of the gravid uterus, the latter comes in contact with the abdominal wall. Under these circumstances if the abdomen be gently tapped with the end of the finger it will yield a dull sound, proving that a solid body of some sort lies beneath. But in spurious gestation a sound will be elicited similar to that heard when a drum or other hollow body is gently sounded. It is a very singular fact that although the patient's abdomen may be as large in a case of spurious pregnancy as it is at the close of real gestation, the enlargement will completely subside if chloroform be administered. The anæsthetic must be given until the patient's respiration offers to become stertorous. In applying this most conclusive test, it is important to have witnesses present in whom the patient places the most implicit confidence, because, although the abdominal enlargement disappears completely while the patient is under the influence of the chloroform, her abdomen will be just as large by the time she wakes up as before she went asleep. In the absence of testimony conclusive to her, she may refuse to be convinced that the abdomen subsided during the sleep produced by the chloroform. Nor is the enlargement alluded to, produced by an accumulation of gas, because exhaustive experiments have proved the contrary. The symptoms may be fully established and go on without cessation for a few weeks or months, and then quickly disappear without any



treatment. A sort of sham miscarriage often terminates an equally sham pregnancy. This is the usual conclusion in unmarried women. In married women, the symptoms may continue for the usual duration of gestation, when the whole phenomena of mock pregnancy may be brought to a close by an equally mock parturition. In some cases, however, the baseless hopes are kept for years, the patient denying the force of all evidence opposed to her cherished delusion.

*Treatment.*—It is very fortunate for ladies who suffer from spurious pregnancy that the nature of this curious affection is sufficiently well understood to render its cure quite certain, if not always very speedy.

The first point to be gained, is to convince the lady that she is not pregnant. This is sometimes a work of some difficulty; but if it can be accomplished, a most important point is gained, because the patient's mental influence is henceforth exerted on the right side. Many patients who suffer from the disorder under consideration, are in impaired health. If there are no special indications for treatment, general tonics, such as the following, may be used with great advantage for two or three weeks until distinct improvement in the patient's general condition has been attained:

302 R. Sulphate of iron.....20 grains.  
 Sulphate of quinine..... 1 dram.  
 Acetate of strychnia..... 1 grain.  
 Glycerole of starch a sufficient quantity.

Triturate the three first ingredients together in a mortar. Divide into 60 pills. Take one pill after each meal.



- 303 R. Yellow cinchona bark in coarse powder.....1 ounce.  
 Catawba wine..... 2 pints.

Macerate the bark in the wine for seven days, shaking frequently. Take one to two tablespoonfuls one hour before meals.

- 304 R. Citrate of iron and quinine.....1 dram.  
 Fluid extract gentian.....3 drams.  
 Spirits of cinnamon.....3 drams.  
 French brandy.....1 ounce.  
 Water to make.....6 ounces.

One teaspoonful to one dessert-spoonful after meals. The above is a very elegant and effective combination of iron with vegetable tonics.

Many cases of anæmia occurring during gestation, real or false, are not appreciably benefited by the medicinal use of tonics containing iron, although the metal be evidently needed by the debilitated condition of the patient. They are not improved mainly because the iron simply passes through the digestive organs without being absorbed into the blood. When this is the case the stools are blackened by the presence of the iron. Under these circumstances the use of the following bath will favor the absorption of the metallic tonic, and do much to increase the muscular strength.

- 305 R. Strong muriatic acid..... 1 ounce  
 Warm water .....30 gallons.

This bath must be taken in a wooden tub, as the acid would corrode a metallic vessel.

The patient should remain in the bath from ten to twenty minutes. Three or four baths a week at the most are sufficient. If the patient cannot procure a



wooden tub large enough to accommodate the whole person, very good results can be secured by the use of an acid hip-bath; the same proportions of acid and water should be used as indicated in the preceding prescription.

Although spurious pregnancy is a disorder of a somewhat intangible character, it is often associated with well marked disease of the generative organs. This is by no means always the case; yet when such diseases are present, it becomes a matter of very great importance to employ all the methods at our command for their cure. Not because these diseases are of themselves competent to cause spurious pregnancy, but because so long as any disorders of the sexual organs exist, the irritation they excite does much to oppose the cure of the general difficulties, therefore we must use all appropriate means for the cure of these disturbing ailments. The symptoms and treatment for all the uterine affections likely to arise are laid down in this work under their proper heads.

If the patient's stomach be disordered and her appetite poor, the following compound is an excellent and trustworthy remedy for the correction of these difficulties:

306 R.	Sulphate of quinine.....	20 grains.
	Acetate of strychnia.....	1 grain.
	Dilute sulphuric acid.....	20 drops.
	Glycerine.....	1 ounce.
	Water to make.....	4 ounces.

One teaspoonful in water after meals.

If she suffers from nausea with or without vomiting, one of the following remedies will remove it:



- 307 R. Citric acid.....36 grains.  
 Simple syrup ..... 1 ounce.  
 Water.....2 ounces.

Dissolve the acid in the water, and add the syrup.

- Bicarbonate of potash.....36 grains.  
 Water ..... 3 ounces.

Dissolve the potash salt in water.

Take one tablespoonful of each of the above solutions, one after another when nausea is present.

- 308 R. Dilute prussic acid .....1 dram.  
 Simple syrup.....1 ounce.  
 Water .....3 ounces.

One small teaspoonful before meals.

Always shake the bottle before using.

- 309 R. Salicin .....1 dram.  
 Glycerine.....1 ounce.  
 Water.....2 ounces.

Dissolve the salicin in the water and add the glycerine. One teaspoonful half an hour before meals.

- 310 R. Oxalate of cerium.....1 dram.  
 Sugar .....2 drams.

Triturate the ingredients together in a mortar. Divide into 15 powders. Take one powder half an hour before eating in a little water.

- 311 R. Sugar of lead.....30 grains.  
 Dilute acetic acid ..... 2 drams.  
 Water ..... 3 ounces.

One small teaspoonful half an hour before meals, diluted with a little water.



If the patient's general health be good, none of these remedies will be required ; and treatment should be commenced immediately intended to dissipate the functional irritation of the generative organs. For this purpose the following prescriptions are very useful :

- 312 R. Bromide of potassium.....1 ounce.  
 Iodide of potassium.....1 dram.  
 Water .....6 ounces.

Dissolve the potassium salts in the water. Take one teaspoonful in water one hour before meals.

- 313 R. Bromide of sodium .....1 ounce.  
 Iodide of potassium .....1 dram.  
 Water..... 6 ounces.

Dissolve the salts in the water. Take one teaspoonful in water one hour before meals.

The following uterine tonics may be used for several weeks with decided advantage after the above preparations have done their work :

- 314 R. Fluid extract blue cohosh ..... 5 drams.  
 Fluid extract life root.....1 ounce.  
 Fluid extract water pepper.....1 ounce.  
 Glycerine. ....1 ounce.  
 Water enough to make.....4 ounces.

One teaspoonful one hour after meals.

- 315 R. Solid extract unicorn root.....20 grains.  
 Solid extract life root.....20 grains.  
 Dried sulphate of iron .....40 grains.  
 Glycerole of starch a sufficient quantity.

Mix the ingredients thoroughly. Divide into 25 pills. Take one pill three times a day, one hour after meals.



The last symptom that may annoy the sufferer is very often the enlargement of the abdomen. A woman who is really pregnant rarely complains about this, as she well knows it inevitably accompanies her condition. But those ladies who suffer from spurious pregnancy often complain loudly of the inconvenience, and urgently demand relief. The following simple remedy will do them good:

316 R. Powdered willow charcoal .....1 dram.  
 Whiskey.....1 dram.  
 Water.....2 ounces.

Moisten the charcoal with the whiskey, add the water and take the whole for one dose two or three times a day, about one hour after meals.

If the charcoal should fail, which is very rarely the case, the following may be used :

317 R. Powdered galbanum .....  $\frac{1}{2}$  dram.  
 Powdered gum myrrh... .....45 grains.  
 Sagapenum.....45 grains.  
 Powdered assafetida.....15 grains.

Confection of roses, enough to make a stiff dough. Divide into 40 pills. One pill three times a day.

#### VARICOSE VEINS.

This term signifies a dilated condition of the veins, with a thickening of their coats : causing, in many cases, local dropsy, heaviness, weight and pain in the parts from which they remove the blood. The varicose condition often causes much numbness and loss of power in the affected limb. The enlarged vessels are almost always situated superficially; those caused by preg-



nancy are invariably so. They may, therefore, be readily seen under the skin—enlarged, tortuous, sacculated and of a bluish color. Varicose veins may occur in any part of the body, but they are most frequently observed on the leg below the knee; but, if the producing cause continues to act, the veins of the thigh may also become involved.

Sometimes the veins of the labia, vagina, or of the womb, become varicose. One of the leading signs of pregnancy is a bluish discoloration of the mucous membrane of the vulva, due to a dilated and congested condition of the veins draining the part.

This alteration of color usually arises during the latter part of pregnancy, by the pressure of the enlarged uterus on the venous trunks within the pelvis, by which the return circulation is prevented from flowing toward the heart. The veins of the legs are specially liable to become varicose, because of their great length and perpendicular position, by which the upward circulation in the legs is at all times rendered specially difficult. In some cases the tendency to this affection seems to be hereditary. The enfeebled, lax, soft, debilitated condition observed in phlegmatic women who are inclined to corpulence, favor the occurrence of varicose veins. Women in middle life are more obnoxious to this disorder than those who are young and vigorous.

After delivery, the dilated vessels usually return slowly to their natural condition; but if the varicose condition be well established, or if the woman bears children in quick succession, the dilated veins are unable to contract to their normal calibre. Under these circumstances the coats of the vessels become thickened and permanently dilated. If the patient stands or walks



too much the blood in the enlarged veins may undergo coagulation, with the development of inflammation of the internal venous coats, constituting a disease of a very troublesome character. Sometimes, when the distension is very great and long continued, ulcers form on the shins or about the ankles that are very difficult and slow to heal. In some cases the dilated and weakened vessels burst, allowing a very copious or even fatal hemorrhage to occur before medical assistance can be procured.

*Treatment.*—The treatment of varicose veins is either palliative or curative. The former measures alone should be resorted to during the progress of gestation. Then we should content ourselves by making the patient lie down until the enlarged veins have diminished in size and the swelling of the limbs has disappeared. This done, moderate compression should be made on the dilated vessels to diminish their calibre, support their walls, and favor the blood circulation through them. The varicose condition is thus prevented from increasing, the pain is relieved, the limb rendered stronger, less heavy and cumbersome, while the discoloration of the skin, local dropsy, ulceration and hemorrhages are prevented. The pressure must be applied very evenly, smoothly, and not too firmly, to the leg from the toes to the knee, preferably to the whole leg, by means of a roller bandage or by an elastic stocking of suitable size. By the diligent use of these means a cure can often be attained in cases where the natural elasticity of the veins has not been completely destroyed, and in cases of greater severity the disorder can be notably improved or prevented from becoming worse until gestation has been completed. As before



stated, the varicose condition being due to impeded circulation in the lower extremities because of pressure by the enlarged womb within the pelvis, which cannot be remedied by anything but delivery, elastic stockings are of special value to prevent the progressive enlargement of the dilated veins during gestation, by assisting the venous blood circulation, and they should always be worn under such circumstances. In many cases the varicose veins rapidly diminish in size, attaining their natural calibre in a few weeks or months after delivery by the continued use of the elastic stockings. When the dilated veins are situated on the genital parts, they are much more dangerous and difficult of cure. In all such cases great care must be taken to prevent rupture of the fragile dilated veins during the second stage of labor, a disaster that is very liable to result in copious, perhaps fatal hemorrhage. The only remedy admissible in cases of varicose veins of the vulva until after parturition, is properly directed pressure, which may be applied to the vulva by a bandage passing between the limbs, and drawn firmly against the parts by attaching it before and behind to a belt around the waist.

No elastic stockings or bandages should be applied to the limbs or vulva as long as the swelling continues; this should first be reduced by the recumbent position. The rapid removal of swelling of the lower extremities may be favored by elevating the limbs higher than the body on an inclined plane. The return circulation is greatly assisted by the elevated position, and the local dropsy and swelling quickly removed. The radical cure of severe cases of varicose veins can only be successfully carried out by a competent physician.



## DISORDERS OF THE BLADDER.

As the bladder and the uterus are intimately connected anatomically, any change in the size and position of the latter produces a corresponding effect on the former; thus, during the concluding months of gestation, when the uterus rises high in the abdomen, the bladder is also elevated along with it. Annoyance rarely arises from the change of situation during the middle period of gestation; but in the first three months before the pregnant womb has escaped up into the abdomen, or during the last month when it sinks downward, it sometimes occasions intolerable annoyance by pressing on the bladder. In the latter case, complete relief may be afforded the patient by placing her on her hands and knees; while she is in this position the weight is removed from the neck of the bladder, allowing it to be emptied freely.

Women who are ignorant of this mode of obtaining relief, sometimes suffer from complete retention of urine, causing the bladder to become enormously distended. After it has been filled almost to the bursting point, the urine may dribble away as it does when the neck of the bladder is paralyzed. The true nature of this difficulty is obscured by the occurrence of this deceptive symptom. In a case of retention of urine that came to our knowledge, the physician who was called took means to prevent the overflow of urine, believing the neck of the bladder to be paralyzed; of course he failed. Another medical man was summoned, who recognized the true nature of the case immediately, introduced a catheter and drew off an enormous quantity of urine, to the great relief of the patient. Complete retention of this severe character is not, however, very common, but a trouble-



some irritation is often a source of much annoyance. If the difficulty in urinating be not relieved by assuming the position on all fours during the act, or if it be specially disagreeable to the patient to do so, much relief may be obtained from supporting the uterus by means of a suitable bandage around the abdomen. In the most obstinate cases relief must be secured by the use of the catheter at suitable intervals, until after delivery.

Irritability of the bladder not unfrequently occurs during gestation, accompanied by symptoms so closely resembling stone, that the most experienced surgeon may be unable to decide the question without a physical examination of the bladder. The disorder under consideration is usually sympathetic, and is frequently associated with other nervous affections peculiar to the gravid state. In some cases it is produced by a morbid condition of the urine. The patient is constrained to pass water very frequently, a few drops at a time—the smaller the quantity the greater the pain in doing so. When the disorder is due to pregnancy it may continue to annoy the patient more or less until delivery, or it may pass away at any time, just as morning-sickness sometimes disappears spontaneously. Much relief may be obtained by the use of hot hip-baths. The temperature of the water should be at first about blood heat, not over one hundred degrees at the most; then while the patient is sitting in the bath, more hot water should be gently poured down the side of the tub until the temperature has become as hot as may be comfortable.

The use of one of the following prescriptions is often curative, particularly when used along with hot hip-baths;



- 318 R. Marshmallow root.....2 ounces.  
 Bicarbonate of potash.....2 drams.  
 Warm water.....1 quart.

Infuse the root in the water for two hours, strain, dissolve the potash in the infusion. Take one wine-glassful three to six times a day.

- 319 R. Trailing arbutus.....1 ounce.  
 Hair-cap moss.....1 ounce.  
 Liquor potassa.....2 drams.  
 Warm water.....1 quart.

Infuse the herbs in the water for two hours, strain, add the liquor potassa to the infusion. Take one wine-glassful three or four times a day.

- 320 R. Broom tops.....2 ounces.  
 Sweet spirits nitre.....3 drams.  
 Warm water.....1 quart.

Infuse the herb in the water for two hours, strain and add the spirits of nitre. One wine-glassful every four hours.

The same causes that give rise to irritability of the bladder sometimes produce inflammation of its lining membrane, especially in weak and delicate women.

When the latter disorder is developed it greatly adds to the local irritation and the general constitutional debility. Under these circumstances the patient suffers from pain and smarting while urinating, and for some time afterward. When the disease becomes severe the urine has the odor of smelling salts, and is sometimes quite fetid. The water is mixed with a glutinous, stringy mucus, which settles to the bottom in a ropy mass. After standing a few hours the urine separates into two parts, the upper layer being clear like healthy



urine, but the lower consists of the mucus already alluded to. The mass of mucus is often tough enough to be lifted on the end of a stick like so much tar.

Retention of urine from atony of the bladder caused by severe and prolonged labor is sometimes the remote but effective cause of the grave difficulty under consideration.

The following case is instructive :

A young mother, after an exhausting labor, was unable to urinate, and her physician failed to ascertain whether she could do so or not as his duty was, and the lady felt too bashful to inform him concerning her disability until the third day when the bladder had become distended to the bursting point ; she was then relieved by the catheter, but the bladder was so paralyzed by the enormous distension to which it had been subjected that she could not afterward empty it perfectly ; therefore some urine always remained therein after urinating which necessarily decomposed, causing chronic inflammation of that viscus, from which she continued to suffer until she came under the author's care seven years afterward. For such conditions one of the following prescriptions may be used very successfully :

321 R. Fluid extract seven barks .....1 ounce.  
 Glycerine.....1 ounce.  
 Water.....1 ounce.

One teaspoonful three times a day in water one hour after meals, or the remedy may be prepared in the following manner :

322 R. Fresh root of seven barks.....8 ounces.  
 Water.....2 quarts.

Cut the root into small pieces, boil it in the water until it be reduced to one quart, add four tablespoonfuls



of good old gin. Take one tablespoonful four times a day. Each dose should be taken about one hour after meals.

- 323 R. Bi-borate of soda.....2 drams.  
 Fluid extract of bearberries.....1 ounce.  
 Sweet spirits of nitre..... $\frac{1}{2}$  ounce.  
 Paregoric ..... $\frac{1}{2}$  ounce.  
 Water .....3 ounces.

Dissolve the bi-borate of soda in the water, add the other ingredients. Take one teaspoonful three or four times a day.

- 324 R. Fluid extract buchu.....1 ounce.  
 Fluid extract pareira brava.....1 ounce.  
 Fluid extract bearberries.....1 ounce.  
 Fluid extract pipsissewa.....1 ounce.  
 Glycerine.....1 ounce.  
 Mucilage of slippery elm.....7 ounces.

One tablespoonful four times a day. One dose one hour after each meal, and one before retiring for the night.

In the severest cases a cure cannot be attained without remedies addressed to the inside of the bladder itself. The viscus may be washed out by means of a double current catheter with the following preparation, and excellent effects secured :

- 325 R. Geddes' extract of hemlock.....1 ounce.  
 Warm water.....1 quart.

The use of the aforementioned remedies, with general tonic treatment, if the patient be debilitated, will secure good results.



## DISORDERS OF LOCOMOTION.

There is no doubt but that the cartilages between the pelvic bones and the ligaments by which these bones are held together, along with the other pelvic tissues, undergo more or less softening during gestation. This result is due to the abundant secretions derived from the copious supply of blood circulating in the uterus and contiguous parts.

The amount of motion accruing to these joints is very trifling in the vast majority of cases. In rare instances, however, the amount of relaxation has been so great as to place the patient in nearly the same condition as if the pelvis were fractured. Cases are recorded in which a separation of one inch has been observed between the pubic bones. The symptoms usually observed are pain and uneasiness, which is aggravated by walking or even by moving in bed. Great care is required to prevent these cases assuming a very serious character. Absolute rest is of the utmost importance for the purpose of preventing complete separation of the pelvic joints—an occurrence that would render the cure very protracted. After labor the relaxed condition of the pelvic tissues passes away with the cause to which it was due. The patient should not make any effort to move herself in bed, but should be moved, when necessary, by careful attendants; muscular efforts on her part are very prejudicial to recovery. A stout bandage around the loins will greatly assist the union of the joints by strengthening and keeping them together in the same manner that splints preserve the fractured parts of long bones in apposition. In a large number of cases pregnant women have more or less difficulty in walking during the last month of gestation; in some it is almost impossible on



account of the pressure exerted by the gravid uterus. Rest until delivery and recovery therefrom is the surest remedy, although notable relief may be obtained by a properly adjusted bandage, as previously stated.

#### DISORDERS OF RESPIRATION.

Women of nervous temperament are apt to suffer from cough during the early part of gestation. The character of the cough is peculiar, being due largely to nervous disorder. There is rarely any notable expectoration, but sometimes, after a very violent paroxysm of coughing, a little mucus may be raised. Fever is never observed. If the lungs be examined no cause will be found in them to account for the disorder. The blame must be laid on the gravid uterus and its nervous connections through which the irritation is reflected to the lungs. If the paroxysms be moderate no injury is likely to be caused, but if they be violent and long continued, miscarriage is not very unfrequently brought about.

The following remedies are commonly quite successful:

326 R.	Tincture of lupulin.....	1 ounce.
	Tincture of skullcap.....	1 ounce.
	Tincture of hyosciamus.....	$\frac{1}{2}$ ounce.
	Glycerine .....	1 ounce.
	Water. ....	$1\frac{1}{2}$ ounce.

One teaspoonful three times a day, in water.

327 R.	Fluid extract skullcap....	2 ounces.
	Bromide of potash.....	$\frac{1}{2}$ ounce.
	Glycerine.....	1 ounce.
	Water to make.....	4 ounces.

Dissolve the potash in the water; add the other ingredients. Take one teaspoonful three or four times a day, in a little water.



Some patients who suffer from nervous cough are signally benefited by the application of a capsicum plaster between the shoulders, either with or without the use of the foregoing remedies.

If the bowels be constipated the cough will yield much more readily when they are kept in a soluble condition by the use of the following laxative :

328 R. Fluid extract butternut bark . . . . . 2 ounces.  
Fluid extract buckthorn bark . . . . . 2 ounces.

One to three teaspoonfuls once or twice a day, according to the quantity required, to produce one free movement daily.

When the pregnant uterus rises to the greatest height it attains during gestation, about the close of the eighth month, the motion of the diaphragm is thereby so limited as to cause considerable difficulty in breathing, which may or may not be accompanied by cough. In these cases much relief may be obtained by carefully abstaining from all active exercise, in order to avoid overtaxing the respiratory organs. The patient's clothing must be worn loosely about the waist, so that no undue pressure shall be made on the floating ribs. Much relief may be obtained by suspending all the clothing from the shoulders by means of a waist or other suitable contrivance. The patient's diet should be light, digestible and nutritious, and ought to be taken with as little drink as possible. Whatever liquids may be necessary should be drunk about two hours after meals : by this precaution all undue distension of the stomach may be avoided ; the latter condition is sure to aggravate the already oppressed respiration. During the last weeks of gestation the gravitation of



the uterus, which then occurs, will generally relieve the diaphragm from pressure and measurably put an end to the difficulty of breathing. Pregnant women may have any pulmonary disorders that are liable to occur in other conditions. If so, they must receive their appropriate treatment; but the discussion of these affections would be out of place in this work.

#### DISORDERS OF DIGESTION.

Lack of appetite, sometimes amounting to loathing of food, is observed during pregnancy. It is more frequent in the early months, but is not confined exclusively to that period. As it is due to gestation, which must continue until its normal termination, a cure is not always readily attained. Much may, however, be done by the regulation of the diet and by offering the sufferer such articles of food as shall tempt her appetite. A total change of air and scene are often signally beneficial. When the bowels are kept soluble by the use of the following pill the appetite often improves notably :

329 R. Extract of aloes.....30 grains.  
 Extract of nux vomica,..... 6 grains.  
 Extract of hyosciamus.....20 grains.  
 Powdered ipecacuanha..... 1 grain.

Divide into 20 pills. Take one pill every night before retiring.

Bitter tonics are less successful in removing anorexia due to gestation than when it depends on other causes. The following preparation will do as much good as any other remedy of this class :



330 R.	Tincture of golden seal.....	$\frac{1}{2}$ ounce.
	Tincture of nux vomica .....	1 dram.
	Glycerine.....	1 ounce.
	Water to make.....	3 ounces.

One teaspoonful in water half an hour before meals.

The longings of pregnant women for special articles of diet should always be gratified if possible. Although the laws of Moses concerning food that could and could not be eaten at certain times and seasons were very strictly enforced among the Hebrews, these laws were all relaxed in favor of pregnant women. When these longings take morbid directions and the patient indulges a craving for such articles of diet as raw starch, uncooked rice, soap, chalk, charcoal or slate-pencils, they must be withheld, by force if necessary.

Acidity of the stomach, with heartburn, sometimes of a very severe character, occasionally accompanies gestation. Everything the woman eats and drinks seems to be converted in her stomach into strong acids. There is a sensation of heat in the pit of the stomach which extends upward, perhaps as far as the throat, accompanied by eructations of a clear, sour or bitter fluid. The appetite is commonly impaired, but there is no fever or other constitutional disturbance. Alkalies, such as baking soda, usually afford temporary relief, but afterward they make the difficulty worse. The best results are to be obtained by vegetable acids, as in the following prescription:

331 R.	Lemon juice.....	1 ounce.
	Glycerine.....	$\frac{1}{2}$ ounce.
	Water .....	1 ounce.

One to two teaspoonfuls, in water, when heartburn is present.



As soon as relief from the acidity has been secured the stomach should be invigorated by the following tonic:

332 R. Sulphate of quinia.....	20 grains.
Aromatic sulphuric acid.....	20 drops.
Acetate of strychnia.....	1 grain.
Glycerine .....	1 ounce.
Water to make.....	4 ounces.

Water brash, or the eructation of a clear and sometimes tasteless fluid, accompanied by nausea, may be effectively relieved by the following remedy:

333 R. Subnitrate of bismuth.....	2 drams.
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Divide into six powders. Take one powder, in water, three times a day.

Spasm of the stomach may distress women during gestation. It is often due to overloading the stomach, by exposure to cold or to some mental emotion sufficiently powerful to disturb the digestion. The attacks are often very sudden, and are sometimes accompanied by severe suffering: violent pains dart through the body from the stomach to the back; the abdomen is distended by flatulence, and the patient is restless and anxious. Warm fomentations should be applied to the abdomen as hot as the patient can bear them. The bowels should be relieved by the following enema:

334 R. Senna leaves. ....	2 drams.
Boiling water .....	8 ounces.

Infuse the leaves in the water for one hour. Strain and dissolve in the infusion:

Sulphate of soda.....	2 drams.
Molasses .....	2 ounces.



Use the whole for one injection. After the clyster has been given, the patient should lie on her left side, about ten minutes, to allow the liquid to gravitate into the intestines and thereby stimulate them to action effectively. After the bowels have been emptied, if the patient be not relieved, the following remedy may be injected into the rectum with great benefit, the gastric spasm being quickly relaxed by the prompt and effective action of the remedy :

335 R. Compound tincture of lobelia and capsicum. . . . 2 ounces.

Two or three teaspoonfuls may be diluted with two tablespoonfuls of water and given either by the stomach or the rectum. In either case the effect will be satisfactory.

#### PAINFUL AFFECTIONS OF GESTATION.

During the progress of gestation the relations of the pelvic and abdominal organs are greatly altered by the growth of the gravid uterus which, as it rises from the pelvis high into the abdomen, elevates the bladder, elongates the urethra, stretches the roof of the pelvic cavity like a dome, pushes the intestines aside, and even encroaches on the operations of the diaphragm. Pain frequently accompanies these changes. Thus pain in the groins is caused by stretching of the round ligaments, and when the woman feels distress in her back the broad ligaments are very likely to be the offenders. The suffering arising from these sources is often effectually relieved by an abdominal bandage, or by rest in bed until the tightened ligaments have become accustomed to their new positions. Sometimes the uterus itself submits, as it were, reluctantly, to the



necessary distension, and becomes excessively tender, or, in aggravated cases, may be the seat of constant pain.

When this condition continues after quickening it very often causes the pregnant woman much suffering; which is sometimes associated with a painful and tender state of the abdominal walls over the whole surface, or limited to a well defined spot. It is observed more frequently during the latter months, and is then due to the extreme distension occurring at that time.

The suffering is often so severe that the patient is convinced it depends on some grave local inflammation. We cannot expect to do more than palliate these painful affections, because the conditions from which they arise must continue until parturition affords relief. Warm baths of the whole person or of the hips only are, however, of very great service. An abdominal bandage frequently affords signal relief. Painful distension of the abdominal walls is helped by frictions with warm oil or glycerine. Local tenderness may be mitigated by the application of warm cloths freely sprinkled with laudanum. Belladonna plasters, worn constantly over the painful parts, are often useful.

The muscles of the thighs and calves of the legs are often subject to severe cramps during gestation, accompanied by agonizing pain. These muscular spasms may also occur during labor, and then constitute a most painful but not dangerous complication. They are borne by the parturient woman with much less equanimity than normal labor pains. When muscular cramps occur in the progress of parturition they are due almost invariably to pressure on the large nerves in the back part of the pelvis. They disappear as soon as the pres-



sure is removed by delivery. Much relief may, however, be afforded by vigorously rubbing the affected muscles across with a warm, strong hand. Rubbing up and down does very little good, although the latter is the way the treatment is usually applied. The muscular cramps that annoy some women during gestation are caused either by constipation, or by a thin, watery condition of the blood, or by both these together. They are not at all dangerous, but being the cause of much suffering, patients urgently demand relief. Rubbing the muscles is always the best method of relaxing the painful spasm ; but means must be used to diminish the frequency of the attacks, or prevent them altogether if possible. The bowels should be moved daily by an enema of salt water, mucilage of slippery elm bark, or Castile soap suds ; the frequent use of cathartics is apt to increase the spasms by reducing the patient's strength. The following preparation of iron may be taken for about ten days with good effect :

336 R. Bitter wine of iron.....	2 ounces.
Fowler's solution.....	20 drops.
Glycerine.....	1 ounce.
Catawba wine.....	1 ounce.

One teaspoonful after meals.

The following remedies are very useful in preventing the return of the painful muscular spasms when they are due to nervous irritation :

337 R. Compound syrup of partridge berry.....	8 ounces.
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One tablespoonful three times a day.

338 R. High cranberry bark.....	2 ounces
Skullcap leaves.....	.1 ounce.
Skunk cabbage root.....	.1 ounce.
Powdered capsicum.....	$\frac{1}{2}$ ounce.
Powdered cardamon seeds.....	$\frac{1}{2}$ ounce.



Macerate the medicine in two quarts of Catawba wine for four days ; strain. Take one tablespoonful three or four times a day.

Applications of hot, moist flannels or bags of heated salt produce a very soothing effect. Opium or other anodynes internally should be avoided if possible ; these drugs must be reserved for the most painful and obstinate cases that resist milder measures. If opium or any of its preparations has to be used, the best way to do so is by introducing a suppository, such as the following, into the bowel :

339 R. Powdered opium..... 8 grains.  
Solid extract belladonna.....  $\frac{1}{2}$  grain.  
Powdered licorice root..... 30 grains.  
Glycerole of starch a sufficient quantity.

Divide into five suppositories. Place one in the rectum when relief can be had in no other way.

Pain in the right side is sometimes observed during the latter months of gestation ; it is often so acute, especially when excited by rapid walking or other exertion, as to be mistaken for some inflammatory affection. This sort of distress is believed to be due to pressure by the enlarged uterus against the liver, and therefore cannot be removed entirely before delivery. Much relief may, however, be obtained by a gentle laxative containing mandrake such as the following :

340 R. Podophyllin..... 3 grains.  
Solid extract belladonna.....  $1\frac{1}{2}$  grain.  
Solid extract nux vomica.....  $1\frac{1}{2}$  grain.  
Solid extract Calabar bean.....  $1\frac{1}{2}$  grain.  
Powdered capsicum..... 5 grains.



Mix the ingredients thoroughly. Divide into 24 pills. One to three pills when necessary.

The application of hot, moist flannels to the right side over the liver are very serviceable in relieving congestion.

The breasts are sometimes the seat of very acute pain, especially in women who are pregnant for the first time.

Before conception occurs the *mammæ* are, to all intents and purposes, undeveloped organs, so far as their maternal duties are concerned. The development of their milk-producing functions is accompanied by pain, sometimes of a severe character with more or less constitutional disturbance. Under these circumstances it is specially important to keep the bowels open by some mild laxative such as the following electuary which is specially valuable :

341 R. Powdered senna leaves.....	1 ounce.
Powdered jalap.....	$\frac{1}{2}$ ounce.
Cream of tartar.....	1 ounce.
Syrup of ginger.....	3 ounces.

Mix the ingredients perfectly. Take one or two teaspoonfuls when necessary.

Gentle frictions of the breasts with the following liniment affords great relief :

342 R. Glycerine.....	$2\frac{1}{2}$ ounces.
Laudanum.....	1 ounce.

For external use only.

#### FAINTINGS.

During gestation women are very apt to suffer frequently from a temporary feeling of faintness, which



sometimes amounts to actual syncope. Young married ladies in their first pregnancy are most subject to it, although the disorder may occur in gravid women of any age, either in the weak or the strong, nervous or phlegmatic. In some cases the attacks are light, and occur seldom, in others they are frequent and profound, and take place without the least premonition. The disorder is not so alarming as it seems, although fatal results have taken place from puerperal fainting when prompt and effective treatment could not be obtained at the critical moment. While the mother is in the faint, the supply of blood is largely cut off from the child, which sometimes perishes from this cause. The treatment is simple and almost invariably successful when promptly employed. The woman should be laid on her back on a flat surface, her clothing should be quickly loosened about the neck and chest, cold water should be sprinkled in her face and smelling salts applied to the nostrils if necessary. Pregnant women who are subject to fainting fits should never be left alone, otherwise fatal results might readily occur from profound syncope if it were not treated promptly. A teaspoonful of brandy given by the mouth assists materially in the patient's recovery. Either of the following tonics will do much to prevent the attacks :

- 343 R. Elixir cinchona.....3 ounces.  
 Bitter wine of iron.....1 ounce.  
 Tincture of nux vomica.....1 dram.

One teaspoonful every three hours in water.

- 344 R. Partridge berry.....4 ounces.  
 Unicorn root.....1 ounce.  
 High cranberry bark.....1 ounce.  
 Blue cohosh.....1 ounce.  
 Catawba wine.....1 quart.



Macerate the medicines in the wine for one week, shaking frequently. Take one tablespoonful every three hours.

#### CONSTIPATION.

A tendency to constipation is the rule during gestation, regularity and freedom of the bowels are exceptional. A sluggish condition of the intestinal canal may be due to various causes. The pressure of the enlarged uterus diminishes the calibre of the intestinal tube, and to a certain extent paralyzes the vermicular motions of the intestines, by which the intestinal contents are moved onward and downward. Bile is the natural laxative, and when it fails to be poured into the intestines from the liver in adequate quantities, constipation, with clay-colored stools, are the inevitable results. Reflex action no doubt has something to do in causing constipation. Last but not least, the unaccountable negligence of women themselves in this matter has much influence both in producing a sluggish condition of the bowels and reaping all the evil effects that flow from it.

If clay-colored stools be observed the liver is at fault, and requires to be stimulated by some laxative containing a small quantity of mandrake. The following is a very excellent pill, and may be used in moderation with perfect safety and good results :

345 R. Podophyllin.....	3 grains.
Solid extract belladonna.....	1½ grain.
Solid extract nux vomica.....	1½ grain.
Powdered capsicum.....	5 grains.

Mix the ingredients thoroughly. Divide into 24 pills. Take one to three pills when necessary.



But the habitual use of cathartic medicine must be avoided by women during gestation. A daily motion is, however, absolutely necessary; if it cannot be obtained naturally, it should be secured by the use of suitable enemas. Injections of this character should be received while lying on the left side when practicable; if not, the patient ought to lie down on that side after receiving the fluid in order to favor its passage into the upper part of the bowel. If the constipation has been long continued and severe an injection of the following sort will be of service in melting down the hardened masses:

346 R. Fresh ox gall.....2 ounces.  
           Warm water.....1 quart.

For one injection.

The dried ox gall of the drug shops is very useful; of this article one dram is about equal to one-half ounce of the fresh article. If any laxative be required habitually during gestation, the following one is the safest and most effective that can be used in that condition:

347 R. Powdered Turkey rhubarb.....1 dram.  
           Bicarbonate of potash.....1 dram.

Triturate them thoroughly in a mortar. Divide into 12 powders. Take one or two powders when necessary, before retiring for the night.

The habitual use of laxative articles of diet, as stewed prunes, fresh fruits, graham bread with suitable exercise, assists very materially both in preventing and curing constipation. Very often a heaped teaspoonful



of yellow indian meal stirred into a glass of cold water before retiring, will completely obviate constipation throughout the whole period of gestation.

When the constipation has been very severe and neglected for a long time, the lower bowel sometimes becomes so impacted that cathartics even of the most active sort are useless, and the scoop will be required before permanent relief can be obtained.

#### DIARRHEA.

In exceptional cases gestation is accompanied by diarrhea; it occurs sometimes as the primary condition, but it follows and is not unfrequently dependent upon constipation as a direct consequence of that condition. This occurs because the hardened fæces produce such an irritation to the intestinal mucous membrane, that diarrhea results. It is well to remember that in cases of apparent diarrhea, constipation may be the real condition. When a mistake of this kind is made, followed by attempts to arrest the supposed looseness, the patient invariably becomes worse rapidly. Close observation will readily show whether any given case is really diarrhea or constipation; the latter being masked by the former disorder. When diarrhea exists, pure and simple, the dejections are all liquid, but when the difficulty is really constipation, small, hard, dark or blackish masses are mixed with the liquid stools. In the latter case astringents are useless, but a cathartic such as prescription 348, will prove promptly curative:

348 R. Sulphate of soda.....1 ounce.  
Ginger tea.....4 ounces.



Dissolve the soda in the tea and take one-half of the whole for one dose. If no cathartic effect be obtained in three hours, the remaining half may be taken.

There is a form of diarrhea occasionally accompanying gestation which depends on a peculiar condition of the nervous system, and is, in all probability of reflex origin, like the more common difficulties, nausea and vomiting. Remedies adapted to allay nervous irritability are required. The following may be used effectively :

- 349 R. Fluid extract skullcap.....2 ounces.  
 Fluid extract hyosciamus.....1 dram.  
 Glycerine.....1 ounce.  
 Water.....1 ounce.

One teaspoonful three times a day.

- 350 R. Bromide of potash..... $\frac{1}{2}$  ounce.  
 Fluid extract skullcap.....2 ounces.  
 Glycerine.....1 ounce.  
 Water.....1 ounce.

Dissolve the potash in the water, add the other ingredients. Take one teaspoonful three times a day.

If any astringent be required, prescription 351 is very effective and safe :

- 351 R. Solid extract hematoxylon.....1 dram.  
 Bicarbonate of potash.....1 dram.  
 French brandy..... $\frac{1}{2}$  ounce.  
 Hot water.....3 $\frac{1}{2}$  ounces.

Dissolve the hematoxylon in the hot water, allow the solution to cool, then add the other ingredients. Take one or two teaspoonfuls when diarrhea requires to be checked.



When the diarrhea accompanying gestation is very obstinate and will not yield to the foregoing treatment, it is probably caused by chronic inflammation of the intestine, constituting a disease of a very grave character. In such cases the diet of the patient should consist very largely of milk. Better results are sometimes secured when boiled milk is used. Warm fomentations applied over the abdomen once or twice a day are very soothing and curative. The following infusion may be drank freely :

352 R. Marshmallow.....1 ounce.  
Hot water .....1 pint.

Infuse one hour, strain. When cold it is ready for use.

353 R. Slippery elm bark.....1 ounce.  
Hot water.....1 pint.

Infuse two hours, strain. When cold it is ready for use.

The following enema may be employed with excellent effects two or three times a day.

354 R. Infusion of slippery elm.....6 ounces.  
Tincture of prickly ash berries.....1 ounce.  
Tincture of opium.....1 dram.

Two or three tablespoonfuls for one injection, which should be retained as long as possible.

By means of rest, a suitable diet and the preceding remedies a cure can be obtained readily.

#### FALSE WATERS.—HYDRORRHEA.

This somewhat uncommon and very singular disorder consists in a discharge of clear fluid issuing from the



womb during pregnancy, without the rupture of the bag of water in which the foetus is inclosed. In some cases the discharge appears to be caused by undue exertion or mental anxiety on the mother's part, but more frequently it appears without any appreciable cause.

Sometimes it comes away in gushes, and in considerable quantities, in other cases it appears drop by drop. Usually the flow is not accompanied by any pain; but when the quantity is large and the discharge sudden, labor pains with premature delivery may be induced. The liquid exudes from the internal surface of the womb and accumulates between its walls and the bag of waters from whence it appears externally as described.

Harm very rarely arises from this affection and gestation usually goes on and parturition is accompanied quite as safely as when no unusual discharge has occurred. No attempt should be made to check the discharge by astringent vaginal injections. If the discharge be small or moderate, no medical treatment of any kind should be used; but if very large, rest in bed is useful. When the patient is pale and weak, a mild tonic preparation of iron will be useful. Prescription 355 is very elegant and effective.

355 R.	Bitter wine of iron .....	2 ounces.
	Spirits of cinnamon.....	3 drams.
	Fowler's solution.....	30 drops.
	Glycerine.....	1 ounce.
	Water to make.....	4 ounces.

One teaspoonful after meals.

After the above preparation has been taken for ten



days, the following remedy will be useful in checking the flow of liquid from the uterus :

356 R.	Partridge berries.....	4 ounces.
	Unicorn root.....	1 ounce.
	High cranberry bark.....	1 ounce.
—	Blue cohosh root.....	1 ounce.

All the ingredients should be in coarse powder. Macerate them for seven days in one quart of Catawba wine. Shake frequently, strain. Take one tablespoonful three or four times a day.

#### PILES.

The pressure exerted by the gravid uterus during pregnancy on the blood vessels inside the pelvis, obstructs the return circulation from the lower bowel, and in this way sometimes causes piles in women during gestation who never suffered from them before. The same cause greatly aggravates the disorder in those who were previously subject to piles. When constipation is added to uterine pressure, great distress is often produced by the development of large internal hemorrhoids. When these tumors grow rapidly their texture is very friable, and they are consequently very apt to bleed. A moderate hemorrhage, however, is advantageous; it empties the piles, reduces their size, and affords great temporary relief. But when the hemorrhages are repeated frequently, the general health is often seriously impaired by the losses of blood abnormally increasing the anæmia that commonly exists during gestation, with the distressing nervous disorders accompanying the anæmic condition.

So long as pregnancy continues, surgical operations intended to effect a radical cure are altogether inadmis-



sible. Palliative treatment alone must be used. The bowels should be kept soluble by the use of prescription 357.

357 R.	Powdered senna leaves.....	1½ ounce.
	Powdered licorice root.....	1½ ounce.
	Powdered coriander seed.....	6 drams.
	Flowers of sulphur.....	6 drams.
	Powdered sugar.....	6 ounces.

Mix the powders thoroughly. Take one teaspoonful in a wine-glass of water before retiring for the night. The above is a very mild but effective laxative for persons who suffer from hemorrhoids.

The tumors should never be allowed to remain outside the bowels for any length of time. To return them may be painful, but, as they must be returned, it should be done promptly, because the longer they remain down the more difficult and painful will the operation become. If the tenderness be very great, it may be remedied before returning the piles by the application of a hot linseed-meal poultice freely sprinkled with laudanum. The poultice should be applied as hot as may be tolerable to the patient, and changed frequently. At the end of an hour or two the irritation and size of the pile tumors will be diminished, so that they may usually be readily returned into the bowel. After the piles have been replaced any remaining irritation may be removed by one of the following ointments :

358 R.	Powdered galls.....	30 grains.
	Powdered opium.....	30 grains.
	Lard.....	1 ounce.

Triturate the ingredients together in a mortar. A small quantity may be pushed into the bowel when necessary.



- 359 R. Stramonium ointment.....1 ounce.  
 Powdered dried alum.....2 drams.  
 Sulphate of morphia .....6 grains.

Triturate the ingredients together in a mortar. A small quantity may be pushed into the bowel when necessary.

Much benefit may be secured by the injection into the bowels of the following saline solution before retiring for the night, and retaining it if possible. If an effort be made to do so the uncomfortable feeling of distension which is produced will soon pass away.

- 360 R. Ditman's sea salt .....1 ounce.  
 Cold water..... ..1 quart.

Dissolve the salt in the water. Use four to six tablespoonfuls for one injection.

The introduction into the rectum of a hard rubber conical bougie an hour or two daily, will do much good by gently squeezing the blood out of the piles into the general circulation; by this means the size of the piles is reduced and their tendency to bleed diminished. If the use of the pile bougie fails to control the hemorrhage, the following lotion will usually do so:

- 361 R. Fluid extract stramonium..... 1 dram.  
 Sulphate of iron.....48 grains.  
 Powdered alum..... 3 drams.  
 Glycerine..... 3 ounces.  
 Water ..... 9 ounces.

Dissolve the iron and the alum in the water, add the other ingredients. Two tablespoonfuls may be used for one injection,



The irritation is often reflected to the bladder, causing much distress in that viscus. When the vesical disorder is exclusively due to piles, no improvement will accrue from treatment addressed exclusively to the bladder. Much benefit may, however, be secured in such cases by the use of a shallow, hot hip-bath for about ten or fifteen minutes daily.

Acute external piles very often annoy pregnant women. These painful tumors differ radically from internal piles, being of an inflammatory character. They often appear with little or no warning at all as small, hard and excessively sensitive tumors, situated at the external verge of the anus. If they be let alone, or are treated ineffectively, they usually get well in three or four weeks, after causing very acute and continued suffering, which is sometimes so great as to induce miscarriage. The proper treatment is to slit them up with a bistoury, turn out the hard clot of blood always to be found in their interiors, then apply a warm poultice freely sprinkled with laudanum. Under the foregoing treatment prompt recovery always occurs. A small painless tag of skin usually remains at the margin of the bowel.

Prolapsus of the bowel occurs frequently as a complication of piles, and sometimes it is observed as an independent disorder during gestation. It is usually attended by a distressing bearing-down feeling during defecation. No treatment should be attempted for the purpose of effecting a radical cure in the pregnant condition, lest miscarriage be caused. Palliative measures are alone admissible. Immediately after defecation the prolapsed parts should be washed with cold water and returned into the bowel. The following injection



is often useful in obtaining very valuable improvement:

362 R. Powdered Solomon's seal .....	1 ounce.
Powdered geranium root.....	1 ounce.
Powdered poke leaf.....	1 ounce.
Warm water.....	1 pint.

Infuse four hours, strain; when cold it is ready for use. Inject one tablespoonful when necessary, and retain it.

#### PARALYSIS.

Paralysis occurring during pregnancy and caused by that condition, with or without some complicating affection, is by no means rare. It may consist either of loss of muscular power, affecting one lateral half of the body, or the legs alone may become powerless, or the facial muscles may become affected, producing contortions of the face, deafness, loss of smell, taste, or dimness of vision may be observed. In a large proportion of cases the difficulty is associated with disorder of the kidneys as proved by the presence of albumen in the urine. We have already stated that albuminuria is present in about twenty per cent. of all pregnant women without the development of any serious symptoms whatever. In a large proportion of cases the albumen disappears from the urinary secretion shortly after parturition. As the paralysis accompanying gestation usually depends on a transient cause, recovery may be expected after parturition. Paralysis of the various kinds alluded to may be developed for the first time either before, during, or after labor. Every case of paralysis occurring in connection with gestation should be carefully watched, for the reason that, although we



have good grounds to anticipate an auspicious termination of the malady, the most disastrous results may ensue. To the loss of power may be added convulsions, effusion into the ventricles of the brain and spinal cord, or apoplexy. If along with the development of grave symptoms of this character the urine is found to be albuminous, and the general disorder progressive, the propriety of inducing premature labor to save the woman's life may have to be anxiously considered by competent medical men.

When gestation is the sole cause of the symptoms, and this has been safely terminated, it is surprising how rapidly even very grave cases usually recover.

When paralysis occurs during pregnancy without the presence of albumen in the urine, the aspect of the case is very hopeful. The loss of power may be due to hysteria; but if so there will be almost invariably other hysterical manifestations associated with it. Under these circumstances the pregnancy may properly be allowed to continue until the full term with the confident hope that the mother will recover when parturition has been accomplished. Partial paralysis of the leg, generally of the left, sometimes occurs from pressure of the presenting part during labor on the pelvic nerves. It may continue for some days or weeks after delivery, but recovery is always certain. If the loss of muscular power continues after parturition, the treatment by the Swedish movement cure is the most successful known. Strychnia, the popular remedy for paralysis among medical men, very rarely does good, but is often signally injurious by positively increasing the paralysis in the end through overstimulation of the nervous centres.



## PALPITATION OF THE HEART.

Women who possess acute nervous susceptibilities are very apt to suffer from excessive functional action of the heart during gestation, particularly in the early months, leading them to the belief that the heart is seriously diseased. Excessive action of the heart is often induced by very moderate exertion, and it may occur while the woman is often at perfect rest. When it is violent and long continued, miscarriage may be the direct result. The difficulty under consideration is always aggravated by constipation, and sometimes seems to depend mainly on that condition. Under these circumstances it ceases very often as soon as the bowels are regulated. In the latter months of gestation the upward pressure of the enlarged uterus often causes distressing palpitation. From the nature of the case the latter difficulty cannot be remedied until after parturition, or at least until the uterus sinks down in the pelvis during the last month of gestation. Either of the following prescriptions will often do good by controlling the nervous element of the difficulty :

363 R. Tincture of digitalis.....3 drams.  
 Glycerine.....1 ounce.  
 Water to make.....4 ounces.

One or at most two teaspoonfuls twice or thrice a day.

364 R. Tincture of cereus grandiflorus.....5 drams.  
 Glycerine.....2 ounces.  
 Catawba wine to make.....4 ounces.

One small teaspoonful one hour before meals.

The following remedy does good both as a general and local tonic :

365 R. Compound syrup of partridge berry.....6 ounces.

One tablespoonful three or four times a day.



## THE INFLUENCE OF GESTATION ON CHRONIC DISEASES OF THE HEART.

Pregnancy and parturition usually exert an unfavorable influence on organic diseases of the heart. Of course the danger incurred thereby is in direct proportion to the nature and extent of the cardiac disorder. Organic diseases of the heart consist either of changes in the valves by which the various openings are rendered either too large or too small, or of some degenerative alteration in the structure of its walls by which they are weakened, or, strange as it may seem, abnormally strengthened. In the latter case the size and power of the heart are increased, constituting a very dangerous disorder when it attains an advanced stage. In almost any of these conditions gestation becomes a disturbing element of great power. The symptoms arising from the influence of pregnancy on diseased hearts during the early months are mainly sympathetic, and although they may be quite distressing, they are by no means so dangerous as those developed after the first half of pregnancy has elapsed. The gravity of diseases cannot always be estimated by the apparent severity of the symptoms.

Congestion of the lungs and of the mucous membrane lining the bronchial tubes, with or without dropsy of the lungs, and sometimes pneumonia and pleurisy are the disorders that most frequently prove fatal in such cases. The practical deduction from these facts is that heart disease, especially when associated with serious symptoms, such as difficulty of breathing, palpitation, and irregular pulse should render a woman very cautious about contracting matrimonial relations. But when conception has actually taken place in women



laboring under chronic heart disease careful attention to the general health constitutes the best means at our command to make the best of the situation. The bowels must be kept free ; this is better accomplished by a suitable diet, if possible, than by medicines. The patient should be clad warmly, and all exposure to cold avoided. Early to bed and an abundance of rest are essential. The patient should never indulge in exercise sufficiently vigorous to disturb her respiration. If she suffers from lack of exercise in following out this suggestion, the movement cure treatment will prove valuable both by increasing her strength and allaying any nervous symptoms under which she may labor. The meals should be taken as dry as possible. Whatever liquids are required should be imbibed about two hours after eating so as to avoid over-distension of the stomach.

#### ENLARGEMENT OF THE HEART.

The exigencies of the maternal circulation during gestation probably require increased power in the heart, whose special function is to keep the arterial system full of blood so that the vital current may readily flow into the capillary system of blood-vessels. To meet this want the left ventricle, which pumps the blood into the arteries, becomes larger and more powerful during gestation. It is stated by competent observers that the heart remains enlarged while the mother suckles her child. According to some authorities the whole body increases in weight during the latter months of pregnancy to a greater degree than can be accounted for by the size of the uterus and its contents.

Both the enlargement of the heart and the increase of weight disappear in due time without any treatment,



except in women who have borne many children especially if the births have occurred in rapid succession; under these circumstances some cardiac enlargement is very apt to be permanent, but it does not constitute a disease except some morbid cause has been added to the influence of gestation.

#### THE CONDITION OF PUERPERAL WOMEN IMMEDIATELY AFTER DELIVERY.

Maternity is a perfectly natural and physiological process. Theoretically, diseases should not necessarily arise during the progress, and because of gestation, and they probably would be much less common if pregnant women were placed under perfectly healthful conditions. But the baneful influence of many civilized habits of dress and diet, of close, ill-ventilated rooms, sewer gases, and many others, along with the work and worry of modern life, combine to depress the vitality of the race, and to render the propagation of the human species a duty involving much risk to the mothers on whom it devolves. Some authorities have maintained that about one out of every one hundred and twenty-six women delivered at full term died within four weeks afterward. This estimate is probably far too high, since it is based on statistics including all causes of death after parturition within the period specified. Some of these were, doubtless, entirely independent of the puerperal condition. Gestation has a powerful influence in staying the destructive effects of chronic diseases so long as it continues; but after parturition they are apt to resume their baneful work with renewed energy. Many puerperal women die within a few weeks after delivery of consumption, liver disorders, Bright's dis-



ease, and other affections; but the mortality arising from such causes should not be charged to the gravid state, having really nothing at all to do with it.

The blood of puerperal women is not only very thin and watery, particularly in the latter months of gestation, but as soon as labor is over it becomes loaded with effete matter arising from the melting down process taking place in the enlarged uterus as soon as it is emptied at parturition. All the channels by which the body is purified, the skin, kidneys, lungs, and intestinal canal are therefore kept in great activity until the impurities are eliminated from the system. In addition to this source of impure blood, the raw, ragged condition of the inside of the womb presents an immense surface well adapted to absorb into the vital fluid the septic matters by which the genital passages are sometimes bathed for several weeks after delivery. When these facts are considered it is surprising that blood poisoning, in its various forms, is not more common than it is. Disinfecting the inside of the uterus and the vagina by one or other of the following antiseptics is very useful:

366 R. Solution of chlorinated soda.....1 ounce.  
Warm water.....1 quart.

Use the whole for one injection.

367 R. Strong carbolic acid.....2 drams.  
Warm water.....1 quart.

Use one pint for one injection.

#### JAUNDICE.

The capillary vessels that collect the blood from the intestines coalesce in the portal vein, by which great



vessel it is passed into the liver. While circulating through this organ the vital fluid has certain changes of very great importance impressed on it. The bile is separated therefrom and poured into the intestines. When the liver from any cause fails to separate all the bile from the blood flowing through it, the bile passes on into the général circulation, from which the coloring matter of the biliary fluid is deposited in all parts of the body, tinging them of a more or less deep yellow hue. This condition is known as jaundice.

It is never an individual disease, but is merely a symptom of some deeper affection. Jaundice occurs more or less frequently during the latter months of gestation, although it may occur as early as the second or third month. In the former it is usually due to the pressure exerted by the enlarged uterus on the liver or its duct, by which the bile is conducted into the intestines. In the latter it may arise from any of the causes competent to produce jaundice in the non-pregnant state. Sometimes its duration is short, and the woman soon regains her usual color and health; but when jaundice occurs during the progress of any case of gestation it commonly continues to the end.

Previous to the attack the patient will sometimes complain of more or less disorder of the stomach and bowels. Jaundice has been known to occur after a fit of severe vomiting or violent mental emotion. Very often the general health seems to be but little disturbed, but in others grave symptoms are developed, such as shiverings, flushings, cough, loss of appetite, nausea, pain in the right side, frequent pulse, fever, high-colored urine, with obstinate constipation. A severe attack in advanced pregnancy is very apt to cause miscarriage—



a disastrous result, which is, however, much rarer in early gestation.

When the discoloration of the skin appears during the early part of gestation, and the symptoms are not severe, the patient should be kept quiet, confine herself to a light and digestible diet and have the bowels opened by a gentle laxative that acts specially on the liver. The following preparation is admirably adapted to that purpose :

368 R. Glauber's salts.....1 ounce.  
Fluid extract senna.....3 drams.  
Ginger tea.....4 ounces.

Dissolve the salts in the tea, and add the senna. Take from one-fourth to one-half of the whole quantity for one dose. If no laxative effect be obtained in three hours, a portion or the whole of the remainder may be taken.

After the operation of the medicine the following prescription will be very useful in correcting the disordered hepatic functions :

369 R. Fluid extract fringe tree.....2 ounces.  
Fluid extract great celadine.....1 ounce.  
Glycerine.....1 ounce.  
Water.....2 ounces.

One teaspoonful three times a day.

When the jaundice is due to pressure by the uterus on the liver in advanced pregnancy, much good may be done by having the patient sleep on the left side ; on assuming this position the uterus falls away from the liver during sleep, so that pressure thereon from this cause is largely diminished.



## RUPTURES.

Ruptures of various kinds and degrees of severity may have existed before conception, or they may occur during the progress of severe labor. In any case very great care is required during parturition to prevent the rupture being forced down so violently as to render its return into the abdomen very difficult, if not impossible; particularly if it be allowed to remain down until swelling and strangulation take place. Protrusion of the parts should be prevented either by the use of a truss or by the application of the hand to the aperture, with firm pressure, during a pain. If a rupture descends during labor, so that it becomes strangulated, the labor may have to be terminated by artificial means before the rupture can be reduced. The necessary obstetric operations should not be delayed too long, otherwise gangrene may occur in the prolapsed intestine, and the patient's life be sacrificed unnecessarily. Sometimes an opening is produced by severe labor or other cause at the umbilicus, or at some part of the abdominal walls, which increases in size during the progress of each successive pregnancy to such an extent that the pregnant uterus itself has escaped through the opening. The only remedy for such difficulties is a properly applied abdominal bandage, and for other ruptures a suitable truss.

## EPILEPSY.

The prominent symptoms of this disease are sudden loss of consciousness, and sensation, with violent spasms of the voluntary muscles, the attacks occurring at irregular intervals. In some cases the patient has warning of an impending attack, to which the name of epileptic



aura has been given. The aura has been differently compared by sufferers to a stream of cold water, a current of warm or cold air, the creeping of an insect, or to a mist rising about them. The peculiar sensations alluded to begin at the extremity of a limb or at the pit of the stomach, from which they gradually extend toward the head; when the special sensation seems to arrive there, the epileptic paroxysm begins.

The influence of pregnancy is such that, in some cases, the fits are increased in frequency and severity, while in others very notable amelioration has occurred in consequence of gestation. Although we might naturally expect that a pregnant woman suffering from epilepsy would be apt to be attacked by convulsions at delivery, yet experience has shown that this is by no means necessarily the case; as the labors of epileptics are usually quite free from any such seizure. The remedies that are found to be most serviceable in the treatment of epilepsy in the non-gravid condition are not admissible for its cure during gestation: therefore treatment should be delayed until after parturition; but its description does not fall within the scope of this work.

#### THE USE OF ANÆSTHETICS.

When sulphuric ether and chloroform were first used to mitigate the pains of parturition, many able physicians and otherwise sensible laymen argued gravely against the iniquity which was being perpetrated in relieving suffering women of the Divine curse recorded in Genesis: "In sorrow shalt thou bring forth." We are decidedly of the opinion that after these merciful remedies have done their utmost for women in the hours



of trial, enough suffering remains to fulfill as heavy a curse as the Almighty intended they should bear. Sulphuric ether, chloroform, and chloral hydrate, are the anæsthetics that have best stood the tests of time and experience.

Chloral hydrate is specially valuable, because when its specific effects are once secured they continue throughout the parturient effort. On the other hand, the effect of chloroform is very evanescent, and while the patient is under its influence the drug tends, in some cases, in a marked manner to render the pains less effective, thereby so retarding the labor that its use has to be abandoned. This retarding effect is, however, much less marked during the second stage, when the pains become propulsive, than in the beginning of labor. When chloroform is administered continuously it almost always causes nausea and vomiting. Chloral, on the other hand, although it has not the same absolute power over pain, however severe, possessed by chloroform, produces a dreamy, drowsy state, in which the pain is felt much less acutely. It is, therefore, in the first stage, when the pains are cutting and grinding, due to dilatation of the neck of the uterus, that this valuable medicine finds its opportunity. When patients, in whom the uterine neck is rigid and yields slowly to severe pains, are given a dose or two of chloral hydrate, the pains often become less frequent but much stronger, and the parturient process goes on in a more satisfactory manner and with greatly diminished suffering. When pure chloral hydrate is given in fifteen-grain doses, not more than one or two at the most, at an interval of one hour, the patient becomes drowsy and sleeps lightly between the pains, only waking up as each



uterine contraction comes on. Another prominent advantage possessed by chloral hydrate consists in the fact that its proper use during the first stage does not interfere with the administration of a little chloroform when the pains become most intense, just previous to the completion of parturition. Much less of the latter drug is required when the effect of the chloral hydrate still lingers in the patient's system. When the latter remedy is cautiously administered, it will be found that women usually sleep quietly through what would be otherwise a severe labor, without complaining of any great suffering. There is one very important rule never to be forgotten, that chloroform should never be given continuously. When the pain is felt to be approaching, a little of the drug may be poured on a soft cloth, and the patient herself allowed to hold it about half an inch from her own nose, to allow the anæsthetic to be mixed with a due proportion of air before it enters the lungs; the soothing effects are so rapidly produced that the patient lapses into unconsciousness, the pain is scarcely felt, and the patient's hand holding the chloroformed handkerchief drops away from her nose; the supply of the drug to her lungs is thus cut off, and she wakes up after the pain subsides. This intermittent method of using it constitutes its peculiar safety in labor. No case of death in the parturient room has occurred from chloroform, although it has been used for many years all over the civilized world in many thousands of cases; these results are largely due to the fact that the effect of one dose is allowed to pass off by the above-described mode of using the drug before another dose is administered.

As the parturient process approaches its termination, and the pains become very severe and almost con-



tinuous, in proper hands it is a sound practice to give the suffering woman an anæsthetic to the extent of causing complete insensibility; but in all cases where chloroform is used, great care should be exercised in securing complete contraction of the uterus after parturition, because there seems to be in these cases a decided tendency to uterine relaxation, which, if it occurs, may produce dangerous, perhaps fatal, flooding.

The effects of sulphuric ether are in some cases more satisfactory, the whole process of parturition being carried on with little suffering; but in many others the drug produces a species of intoxication with hysterical excitement, and the pains are at first diminished so that they sometimes cease almost entirely, while the tendency to uterine relaxation and subsequent liability to hemorrhage is greater in these cases than in those to whom chloroform has been administered.

#### SLEEPLESSNESS.

The want of refreshing sleep is distressing at all times, but is, if possible, specially intolerable during gestation, when there are often so many other discomforts to endure. Still, it is frequently a source of much suffering, particularly in women of a delicate, nervous organization, who have, perhaps, been habitually poor sleepers before conception.

If sleep be imperfect for several days or weeks, serious symptoms are sure to be developed; the woman becomes restless, peevish, and irritable, her appetite fails, the skin becomes hot and dry, she loses strength, her pulse increases in frequency, and if speedy relief be not obtained, more serious disorders may be expected. Sleep, like every other desirable thing, may be of dif-



ferent qualities: when it is habitually broken by frightful dreams it does the sufferer very little good—perhaps positive injury in some cases.

In procuring sleep for the sleepless, the chief indication is to remove irritability of the nervous system. For this purpose narcotic drugs are dangerous, and should not be used.

In many cases very simple means will succeed, and should always be tried first. A prolonged warm bath is very often efficacious. If the stomach be oppressed by the evening meal, the sleep is very apt to be disturbed; but it is a mistake to suppose that necessary food taken shortly before retiring will cause wakefulness; on the contrary, it often induces sound and refreshing sleep. In many cases a glass of good wine or lager beer taken before retiring is an effective soporific. Gentle exercise in the open air powerfully predisposes to sound sleep. Sitting for a short time before a grate-fire makes some persons quite sleepy, which should be utilized by retiring at once, the bed being previously warmed. If the bed be cold, the sleepiness is apt to be dissipated. For many cases a vigorous rubbing by a good manipulator is a most effective remedy for sleeplessness. Better results are secured if the rubbing be applied shortly before retiring for the night.

The following prescriptions are among the most valuable known to the medical profession. Drugs of all kinds should, however, be used for the relief or cure of sleeplessness in moderate quantities, and for a limited period only.

370 R. Bromide of potassium.....	$\frac{1}{2}$ ounce.
Glycerine .....	$\frac{1}{2}$ ounce.
Cinnamon water.....	2 ounces.



One dessert-spoonful in water before retiring. If no effect be observed at the end of one hour, another dose may be taken.

- 371 R. Bromide of sodium..... $\frac{1}{2}$  ounce.  
 Glycerine ..... $\frac{1}{2}$  ounce.  
 Cinnamon water.....2 ounces.

One dessert-spoonful in water before retiring. If no effect be obtained at the end of one hour, another dose may be taken.

- 372 R. Fluid extract scutellaria.....2 ounces.  
 Glycerine .....1 ounce.  
 Water .....1 ounce.

One teaspoonful three times a day one hour before meals, and one dose before retiring.

- 373 R. Solid extract hyoscyamus.....1 dram.  
 Camphor.....1 dram.

Divide into 20 pills. One or two pills may be taken before retiring for the night.

When it is undesirable to give medicines by the stomach, the following suppository often does good:

- 374 R. Assafetida.....1 dram.  
 Solid extract hyoscyamus.....18 grains.

Mix the ingredients thoroughly. Divide into six suppositories. One may be introduced into the rectum to quiet restlessness and procure sleep.

Tea and coffee should be avoided for several hours before bed time ; the latter is specially effective in dispelling sleep.



## TOOTHACHE AND DECAYED TEETH.

The teeth of pregnant women should always receive careful scrutiny at intervals throughout the whole period of gestation. There is no doubt but that pregnancy predisposes the teeth to decay. The active demand in the pregnant woman's system for earthy matter to build up the foetal skeleton is very great, and is probably the cause of caries occurring in the teeth at this time. This demand may be met effectively by the use, during the whole of pregnancy, of the following remedy by which the needed material is supplied :

375 R. Syrup of the lacto phosphate of lime.....16 ounces.

One teaspoonful to one dessert-spoonful, twice a day, soon after meals.

There is much aversion among medical men to operate on the teeth during gestation, because of the supposed danger of causing miscarriage ; but a severe and continued toothache is much more liable to cause that disaster than the filling or even the extraction of a tooth or two. The grave error of extracting perfectly sound teeth with the hope of removing a severe facial neuralgia, should be avoided. In such cases the bowels should be kept regular by a gentle laxative, like the following :

376 R. Confection of senna..... 2 ounces.  
 Powdered jalap..... 1 dram.  
 Cream of tartar..... 2 drams.  
 Powdered ginger.....90 grains.  
 Simple syrup..... 2 ounces.

Mix the ingredients perfectly. One teaspoonful when required. In obstinate cases this laxative may be taken several times a day.



The following remedy applied to the cheek next to the aching teeth, often affords great relief:

377 R. Tincture aconite root.....1 ounce.  
Chloroform.....1 ounce.

For external use only. To be applied sparingly, until a benumbed but tingling sensation be caused.

When cavities exist in the teeth, the pain can usually be promptly relieved by the following compound:

378 R. Oil of cajeput .....1 dram.  
Oil of cloves.....1 dram.  
Oil of amber.....1 dram.  
Camphor.....1 dram.

Dissolve the camphor in the oils; clean out the cavity of the tooth and fill it by means of a bit of cotton moistened with the mixture. A small wad of cotton wadding wet with chloroform and placed in the ear, sometimes removes the toothache of pregnancy like magic.

#### LEUCORRHŒA OF PREGNANCY.

In consequence of the immense amount of blood flowing to the genital organs during pregnancy, the natural secretions of the parts are then notably increased. Within certain limits this is perfectly natural and requires no treatment except special attention to cleanliness. The secretions of the genital canal, however, sometimes become not only increased in quantity but changed in character; in one patient, the discharge may be almost as clear and thin as water; in another, milky, and in a third, having all the appearance and consistence of ordinary yellow creamy pus. The



vaginal mucous membrane is normally covered all over by numerous papillæ, which becomes greatly developed during gestation, a result that is specially prominent in all cases of leucorrhœa, so that the mucous membrane has then a peculiarly rough and granular appearance. The copious discharges occurring under these circumstances are doubtless due mainly to the peculiar condition of the mucous membrane and its papillæ. The disorder under consideration is very often accompanied by severe irritation and itching of the vulva, the latter being sometimes sufficiently annoying to prevent sleep. When this condition is due exclusively to pregnancy, even the most profuse discharges usually disappear after delivery, and seldom attract much attention or cause annoyance after the lochial discharge passes away. Sometimes, however, cases occur in which such a discharge originally appeared during pregnancy, and doubtless was due solely to that condition, yet it continued throughout convalescence and resolved itself into a profuse and exhausting leucorrhœa. When the difficulty is due exclusively to gestation a radical cure cannot be expected until after parturition, as the cause must, in the nature of things, continue until that event. Much benefit may, however, be attained by proper palliative measures. Vaginal injections are less successful than the insertion of medicated pessaries. Very excellent results may be secured by the use of one of the following prescriptions:

379 R. Powdered dried alum.....2 drams.  
Cocoa butter.....1 ounce.

Melt together and mix perfectly. Divide into 12 pessaries. Place one in the upper part of the vagina every alternate night.



380 R. Powdered catechu.....1 dram.  
Cocoa butter.....1 ounce.

381 R. Tannic acid.....1 dram.  
Cocoa butter.....1 ounce.

382 R. Sulphate of zinc.....1 dram.  
Cocoa butter.....1 ounce.

The last three prescriptions are to be made and applied as 379. A copious injection of tepid water should be used in the morning when a pessary has been inserted the preceding evening.

#### THE USE OF THE OBSTETRIC FORCEPS.

There is no question but that the ancient physicians discovered and were familiar with the use of an instrument of the same character as the modern midwifery forceps. This most valuable discovery was, however, entirely lost to the world for many hundred years, being swallowed up like so much other priceless knowledge in the gloom of the dark ages. The very great value of the invention will be apparent when we consider that there is no surgical instrument that has been the means of averting so much suffering and saving so many human lives as the obstetrical forceps. Dr. Peter Chamberlen, an English physician, about the year 1650, rediscovered this valuable instrument. After having been kept secret by him and his relations for about one hundred years, it was finally introduced generally into practice. Since that time, obstetrical forceps have undergone an immense number of modifications. The inventors of these supposed improvements have each claimed for their instruments advantages of some sort over every other.



Forceps as used for obstetrical purposes at the present day, consist of two sorts, the long and the short; the former are adapted to operations high in the pelvis, while the latter are best suited to operations near the outlet. The forceps may be regarded as a pair of artificial hands by which the child's head may be grasped and drawn through the maternal passages. The instrument consists of two separate blades curved to fit the child's head, and a lock to unite them after they have been introduced, besides the handles by which the operator grasps them.

Much prejudice exists among women concerning the use of these forceps for the purpose of facilitating tedious and dangerous labors. There can be no question but that when nature is competent to carry the process of parturition to a successful termination, no artificial aid should be offered. The most consummate art cannot hope to imitate perfectly the operations of nature. But there are many cases where the mother's pelvis is too small, or deformities exist by which labor is stopped or where the cord comes down in advance of the child's head, where there are convulsions or copious hemorrhage, or where the mother is exhausted by severe and prolonged labor. In all these cases help is urgently demanded to save the lives of the suffering woman and her child, both of whom can often be snatched from the very jaws of death by the timely and skillful use of instruments, as multitudes of mothers can gratefully testify.

Laceration of the mother's soft parts has no doubt often been caused by the careless, ignorant and untimely use of the forceps. But such disasters do not result from their skillful use in suitable cases at the proper



time. Openings between the bladder and vagina and between the latter passages and the rectum, known as vesico-vaginal fistula and recto-vaginal fistula, are rarely if ever caused by the proper use of the midwifery forceps. These great disasters are the result of prolonged labors, the child's head being detained too long in the pelvis, some parts of the walls of the maternal passages are all the while pinched severely between the child and the bones of the mother's pelvis. The vitality of the pinched spots is destroyed, and a hole is produced by subsequent sloughing, the aperture being technically known as a fistula.

#### MILK-FEVER.

The increased size of the breasts that usually occurs in the progress of gestation is often accompanied by a slight secretion of milk during the last few months, but the lacteal fluid intended for the nourishment of the child does not commonly make its appearance until the third day after delivery. About this time the blood circulation in the breasts is notably increased, and they become larger, harder, hotter and often slightly painful. These phenomena are accompanied by great activity in the little glands in which the milk is elaborated, causing the milk ducts to become distended with the nutritive fluid. In many cases the mother experiences a slight rigor, her pulse becomes more frequent, she suffers from headache, and is more or less feverish. Sometimes a notable rise of temperature occurs, constituting milk-fever. All these symptoms pass away in the great majority of cases as soon as the secretion of milk is fully established. There is no doubt but that the importance of milk-fever has been overes-



timated, and that it does not necessarily attend the beginning of lactation. It occurs most frequently in women who are kept on a low diet after delivery, or who have lost too much blood at parturition; especially if the patient's system had been debilitated before that event. The difficulty in question can usually be prevented by directing the patient to take gentle exercise adapted to her strength in the open air before her confinement. To live on a simple, nutritious and digestible diet, and to avoid any undue loss of blood at parturition, the child should be put to the breast soon after birth, and at suitable intervals subsequently. By doing so, the milk is made to flow into the breasts gradually. If the fever should occur in spite of these precautions, the following remedy will reduce it:

383 R. Tincture of aconite root.....5 drops.  
Water.....4 ounces.

One teaspoonful every hour, until the fever abates and perspiration be excited.

In cases where the lochia are very fetid and general symptoms of blood poisoning arise, great benefit may be secured by cleansing the genital passages by the following antiseptic solution:

384 R. Labarraque's solution of chlorinated soda.....1 ounce.  
Warm water.....1 quart.

The whole may be used for one injection.

#### HEADACHE.

Pain in the head is a symptom occurring at the beginning and during the progress of many diseases. It is a disorder from which, although painful enough while it



lasts. perfect recovery can always be attained when the cause of the pain is purely functional, or headache may be a symptom of and accompanying chronic organic as well as some acute diseases of the gravest character. Although this disorder presents, in different individuals, a great variety of symptoms, its various forms may be simplified into two or three great classes of the following kinds : Those accompanied by a diminished supply of blood to the brain, or the anæmic headache ; those in which the blood supply to this organ is unduly increased, or the hyperæmic headache ; and, lastly, those characterized by disorders of the nervous system. Both the former classes are very often associated with and complicated by the latter.

#### SYMPTOMS OF ANÆMIC HEADACHE.

The patient is apt to suffer from fits of depression and lowness of spirits. She borrows trouble, and dreads events never likely to happen. The pain often affects the top of the head which feels hot to the hand. The suffering is not, however, always confined to this locality, but may be situated either at the forehead, or at the nape of the neck. She suffers from dizziness and flashes of light before the eyes. The skin and lips are paler than natural. The tongue is apt to be furred at the back ; she is flatulent and constipated. Her pulse is usually weak and small, and the beats slower than natural. The debility, depression, and misery caused by the disordered conditions producing the headache often continue for a day or two after the actual pain subsides ; and they are apt to beget a desire for alcoholic stimulants which may afford relief for the time being, but often make the difficulty worse in the long run, and



in addition may give rise to a love for strong drinks which might be very difficult to overcome.

## TREATMENT OF ANÆMIC HEADACHE.

Overwork and worry must be avoided ; early to bed to secure abundant sleep is absolutely necessary. Fresh air day and night is an essential remedy of great curative virtue. Undue discharges of all kinds, such as profuse leucorrhœa, should receive appropriate treatment. A little claret is a useful addition to the meals ; it helps the appetite and digestion, but alcoholic stimulants of all sorts should be rigorously avoided at other times. This done the chief indication to be attained by medical remedies is to still farther stimulate, healthfully, the digestive and assimilative powers of the patient so that the quality of her blood shall be improved. As this form of headache is due largely to impoverishment of the vital fluid, the disorder commonly abates in proportion as the quality becomes improved. The following prescriptions are very effective :

385 R.	Citrate of iron.....	30 grains.
	French brandy.....	1 ounce.
	Glycerine.....	1 ounce.
	Spirits of cinnamon.....	3 drams.
	Water to make.....	4 ounces.

One teaspoonful after each meal.

386 R.	Tartrate of iron and potassium.....	2 drams.
	Fowler's solution.....	30 drops.
	French brandy.....	1 ounce.
	Glycerine.....	1 ounce.
	Tincture of cardamons.....	3 drams.
	Water to make.....	6 ounces.

One teaspoonful after each meal.



In some cases active tonics such as the above may prove at first too stimulating in the doses recommended; if so, only one-half or even one-fourth of a teaspoonful may be sufficient at the beginning of the treatment.

#### SYMPTOMS OF HYPERÆMIC HEADACHE.

Hyperæmia of the brain signifies a condition of that organ in which headache arises because too much blood circulates in it. A confusion of ideas and dizziness accompanies this form of headache. The pain is increased by lying down, because the blood pressure within the brain is increased by this position. The head throbs, and sometimes feels as if the skull would burst open. The sight is often dim, the sleep restless, and disturbed by unpleasant dreams. When the headache is severe and continuous the patient's ideas are confused, and the intelligence blunted. Although the sufferer may have been formerly good tempered she often becomes very irritable. If relief be not afforded apoplexy may occur.

#### TREATMENT OF HYPERÆMIC HEADACHE.

It is of the utmost importance that such sufferers should take a cathartic of the proper sort occasionally. Prescription 387 is specially adapted to their needs:

387 R.	Sulphate of magnesia.....	$\frac{1}{2}$ ounce.
	Sulphate of soda.....	$\frac{1}{2}$ ounce.
	Dilute sulphuric acid.....	30 drops.
	Ginger tea.....	4 ounces.

One-fourth to one-half of this prescription is a suitable dose. In some cases the whole quantity may be required.



The meat consumed by these sufferers should be limited to a moderate quantity twice a day; their diet should consist largely of fish, fruits, and vegetables. Stimulants of all kinds are notably injurious to persons who suffer from hyperæmic headaches. The patient's mind should not be overtasked in any way. A period of rest, accompanied by change of air and scene, is a valuable restorative. The following prescription often does a great deal of good :

388 R. Bromide of potassium.....	3 drams.
Bromide of sodium.....	3 drams.
Simple syrup.....	1 ounce.
Spirits of cinnamon.....	3 drams.
Water to make.....	6 ounces.

One dessert-spoonful to one tablespoonful every night before retiring.

When the headache is felt on awaking in the morning one or two doses of prescription 389 often removes all the symptoms in an hour or two :

389 R. Fluid extract ergot.....	2 ounces.
Glycerine.....	1 ounce.
French brandy.....	1 ounce.

One teaspoonful in a little water; if the pain be not better at the end of an hour another dose may be taken. The patient should lie down and keep quiet after taking the medicine.

#### NERVOUS HEADACHE.

Whatever the chief exciting cause of any form of headache may be, a nervous element is common to nearly every one of them. Nervous headache is not confined to any one kind of temperament. Persons of totally



different habit of body and in all ranks of life are subject to its attacks. The disorder is periodical, occurring in some cases as often as two or three times a week, in others not oftener than once or twice a month. These sufferers are often in excellent health between the attacks; they often retire to bed feeling quite well, and get up next morning, after a good night's sleep, with an indefinite feeling of malaise that assures them a nervous headache is approaching. There are good reasons for believing that this variety of headaches protect the system from other and far graver diseases. Victims to the disorder under consideration are rarely attacked by acute inflammations or the severer forms of fever.

Those who have inherited the disorder, or who have suffered from nervous headaches for many years, usually resign themselves to their periods of recurring misery without murmuring as to an inevitable evil. It is an error to suppose that the head trouble is caused by disorder of the stomach. In severe attacks the latter organ almost always becomes more or less disordered; in the worst cases nausea and vomiting of bile occur as the nervous distress reaches a climax. But the gastric disturbance is a secondary effect, and not the exciting cause of pain in the head. All the phenomena are the result of what has been aptly called a nerve-storm. In severe cases the nervous depression is so profound that the digestive capacity is totally destroyed for the time, and the stomach relieves itself by ejecting the food it cannot digest along with a quantity of bile. The pain is often confined to one side of the head, while the other is quite free from any discomfort. In many persons the pain attacks each side of the head alternately. While the headache continues, noise, light and exertion are



disagreeable to the sufferer, and after the pain has disappeared she often feels weaker and less capable of exerting either mind or body. The muscles usually feel sore and bruised, and she suffers from languor for a day or two after an attack. This sort of headache is most common among women who are approaching middle life or who have been exhausted by wearing household duties, or by frequent maternity. Sometimes nervous headaches are specially severe during gestation, and occasionally they are quite cured by the occurrence of conception. Profuse menstruation and copious leucorrhœas are very apt to invite them. Nervous headaches are exceedingly common at the menstrual periods of many women; the pain at these times is purely sympathetic, being due to irritation reflected from the ovaries.

*Treatment.*—Constipation should always be carefully avoided by those who suffer from the painful disorder in question. If a laxative diet does not suffice, the following pill will secure a perfectly natural motion without any cathartic effect:

390 R. Socotrine aloes.....	1 dram.
Powdered myrrh.....	30 grains.
Dried saffron.....	30 grains.
Glycerole of starch a sufficient quantity.	

Mix the ingredients perfectly. Divide into 30 pills. Take one pill before retiring every night until the bowels be regulated.

When the headaches are caused by gestation, no cure can be expected until after delivery. Much relief may, however, be obtained by suitable treatment. If the headaches be accompanied by much nausea, an emetic of warm water to empty the stomach often does great



good, both by relieving the distress and shortening the attack. A mustard plaster applied to the back of the neck is sometimes notably useful. Occasionally hot, and at other times cold, applications to the head are very soothing. When the suffering is very severe, and relief cannot be had from anything else, the pulse being weak and slow, the skin chilly, the hands and feet cold and the features shrunk, a physician should be employed to give the patient a small hypodermic injection of morphia. Complete relief may always be secured by this means. The patient usually goes to sleep when the effect of the drug is developed, and wakes up much better.



## PART III.

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### DISEASES OF CHILDREN.

#### THE HYGIENE OF PREGNANCY.

THE condition of a pregnant woman, both mentally and physically, exercises a very important influence on the development of her unborn child. Women who enjoy a sound mind in a sound body are much more likely to give birth to vigorous offspring than those of whom the contrary is true.

A very large part of the miscarriages that occur from other than criminal causes are due directly to the malign influence of maternal disease. Therefore, before beginning the consideration of the diseases of children, a short sketch of the most effective methods of caring for the health of pregnant women will be appropriate.

Their diet should be plain and easily digested: meats, vegetables, fruits, and farinaceous foods should constitute the ordinary nutriment. Rich, stimulating, highly-spiced food must be used very sparingly, if at all.

Gentle and adequate exercise is essential to the maintenance of health. The careful performance of such household duties as require moving about, exercise a very favorable influence. Severe or very fatiguing muscular effort must be avoided. Lifting heavy weights or any kind of work which requires the vigorous action of the abdominal muscles, like washing and ironing, must not be undertaken



by women during gestation. Such exercise is apt to stimulate the womb to premature contractions and cause miscarriages, especially in those who are predisposed thereto.

During the latter months of pregnancy, when the womb is large and heavy, jolting in street cars or other springless conveyances, riding over rough country roads, and long journeys by railroad, should be carefully avoided.

Pregnant women should not permit themselves to be controlled by strong mental emotions: anger, terror, joy, grief, disturb the maternal health and affect unfavorably the development of their unborn children.

During gestation the skin should be kept in a healthy condition by tepid baths. If the weather be cold and the mother's circulation not very vigorous, reaction after a bath may be promoted by rubbing the skin with a small quantity of alcohol and water, one part of the former to three parts of the latter. Surf bathing has a strong tendency to cause abortions and should be avoided during gestation. Disorders, whether due directly to the pregnant condition or to some other cause, should receive appropriate treatment. Intermittent fever seems to be specially injurious to pregnant women and the foetus; it interferes very seriously with the proper development of the latter, and may even produce miscarriage, and when gestation is not brought to a premature termination, the child is very apt to be born puny and emaciated.

Toothache, due to decayed teeth, should receive appropriate treatment; abortions are much more likely to be caused by the agonizing pains of this affection than by the dental operations requisite for its cure.

There are many cases on record which show that sudden and powerful mental impressions made on the mind of a pregnant woman cause before birth, marks, and, sometimes,



even grave and irremediable deformities, corresponding to the objects by which the mother's mind was affected. I know a lady who has the mark on her leg of a snake-bite of the same appearance as one on her mother's leg which was inflicted by a snake during pregnancy. The same lady has also an instinctive and overwhelming horror of the whole snake tribe. I operated for the cure of hare-lip on an otherwise beautiful young lady whose mother assured me the deformity was caused by the deep impression made on her mind during pregnancy by observing a child who had a hare-lip and who passed her house daily to and from school. The longings of pregnant women for unusual articles of diet should be gratified as far as possible, except in those cases in which the desired luxury would be decidedly injurious. All the restrictions of the Mosaic laws with regard to diet are relaxed in favor of pregnant Jewesses. In order to promote the propagation of an improved race it is most important that every possible influence should be brought to bear on pregnant women which tends to promote their physical and mental well-being. The magnificent physical development of the ancient Greeks was doubtless largely due to the careful attention bestowed on their women during gestation for the express purpose of attaining this result.

#### CAUSES AND PREVENTION OF INFANT MORTALITY.

The new-born child has such a feeble hold of life that about one-tenth of the whole number die before the end of the first month. Nearly one-fourth of all the children born in New York City die before the end of the fifth year. In the country the percentage is not so large, but it is still very considerable.

A notable number of children come into the world suffering



from internal malformations that render the continuance of life impossible. Many are born with hereditary disease, and a much larger number having a strong predisposition to diseases of various kinds. Children are also liable to numerous severe and fatal disorders. As a rule, these diseases—scarlet fever, diphtheria, measles, whooping-cough, etc.—occur but once during a lifetime, but they carry off an immense number of children of all ages. The spread of these and other maladies is greatly favored and their virulence increased by the unwholesome conditions in which multitudes of the children of the poorer classes in great cities live, they being obliged to sleep in rooms where the light of day never penetrates and to breathe an atmosphere loaded with poisonous odors. There is, however, no one cause that directly and indirectly destroys more young lives than improper food. The artificial feeding of infants, instead of nourishing them on mother's milk and the feeding of older children on every article of diet consumed by adults, causes incalculable mischief. The development of scrofulous and tubercular diseases is directly favored; the little sufferers being rendered weak, puny, emaciated, and bloodless; in which condition they readily fall victims to one or other of the fatal diseases to which children are exposed. Depression of the vitality of young children by exposure to cold is another fruitful cause of catarrhal diseases of the throat and lungs. In obedience to the behests of fashion children are exposed to the biting frost, having their legs and arms inadequately protected; or the injury may occur because the children, being restless from having their stomachs filled with indigestible food, throw off the bedclothes during sleep; bronchitis, obstinate coughs, acute inflammation of the lungs, and chronic infantile consumption arise from this cause.



## CONDITIONS THAT MODIFY THE QUALITY OF MOTHER'S MILK.

Every pregnant woman should, for about two months before her expected delivery, attend carefully to the condition of her nipples; they should be gently pulled out several times every day in order to render them long enough to be readily grasped by the infant. Bathing them at the same time in a strong infusion of green tea, or preferably, the following prescription will toughen the skin and prevent those painful cracks and excoriations which cause mothers so much suffering while nursing, prevent the flow of milk, alter its quality, and give rise to broken breast by the continued and severe irritation :

391 R. Tannic acid..... 3 grains.  
Glycerine..... 30 drops.  
Spermaceti ointment..... 1 ounce.

To be rubbed together in a mortar until thoroughly mixed and applied on and about the nipple every night before retiring.

Women who have an inherited tendency to consumption, even when fairly well, are usually unfit to wet-nurse their own children. If such mothers attempt the work, they should do so only so long as their physical vigor continues to withstand the drain of lactation. If they grow thin, bloodless, and weak, their milk will lose its nourishing qualities, and the health of the nurslings will deteriorate.

The health of women who are in the early stages of pulmonary consumption at the time of conception, often improves so decidedly after that event, because of the occurrence of pregnancy, that they think a permanent cure has been attained; a belief in which they are almost invariably in error. Such women never make good wet-nurses, and if



they attempt to suckle their children the results are sure to be disastrous both to the mothers and their offspring.

Inflammation of the breasts, resulting in abscess, prevents nursing as soon as the inflammatory process has arrested the secretion of milk, and rendered the glands too tender to endure the pain of suckling. The hardness and increased size of the inflamed breasts are not caused so much by the presence of milk as by an afflux of blood to the organ, and the deposit of solid matter which breaks down into pus and is poured forth in liquid form when the abscess finally bursts. When it is necessary to remove the milk from an inflamed breast to check inflammation, the infant should not be put to the work, as the milk is unfit for food. When erysipelas attacks a nursing woman the infant should be immediately removed from her; if it be allowed to remain in her arms, it is almost certain to be infected by her disease; but if it escaped the imminent danger of contagion, its health would surely suffer, and its life probably be sacrificed by the changes produced in her milk due to the erysipelatous disorder.

A good wet-nurse should be in vigorous health and have a cheerful, placid temper. Thin, bloodless, nervous, peevish, fretful, irritable women never make good nurses. Infants who are fed from the breasts of such women never thrive, and they are specially liable to convulsive disorders.

A violent fit of anger or of overwhelming terror has been known to change the milk of a previously healthy mother to a poisonous fluid, one dose of which caused an attack of fatal convulsions in her infant a few minutes after the altered milk had been taken.

The longer milk is retained in the breast it becomes more watery. It is well known that the milk last drawn is much richer than that which comes first, therefore in-



infants should be nursed at regular and not too long intervals,—about every two hours for infants below six weeks old, and about double that interval for those up to six months of age. The menses appear in many women before the close of lactation. When this function is established in a perfectly healthy manner no change may be caused in the composition of the mother's milk that will affect her infant unfavorably; but if the menses be profuse, accompanied by much pain, or by nervous symptoms, the health of the infant is very likely to suffer; indigestion, colic, vomiting, and diarrhœa being usually caused. The changes produced in the composition of mother's milk by the occurrence of pregnancy during lactation are of more importance than those due to the return of the menses. The symptoms developed in infants by nursing from the breasts of a pregnant mother, are the same as those arising from nursing one in whom the menses have reappeared; in the former case, however, the injury to the child is apt to be more quickly apparent and of a graver character.

When pregnancy occurs during lactation, the infant should be weaned as soon as the mother's condition has been ascertained.

The milk-giving capacity of mothers differs notably. Many women whose robust appearance would lead us to think they would prove good wet-nurses, fail in this respect when they become mothers; others manifest greater capacity than could reasonably be expected. Usually, good wet-nurses are robust, but not corpulent; they have good appetites and vigorous digestion, genial dispositions and placid tempers. When lactation reduces a woman's flesh and strength, and causes nervous disorders, some other mode of feeding her child should be adopted.

Some mothers who have an abundant supply of milk,



lose a considerable portion of it by its involuntary escape. Preventing the distention of the breasts by nursing the infant at regular and not too long intervals, is the best remedy for this annoying condition. Scantiness of milk may be caused by overwork, insufficient or innutritious food; by age, or by imperfect development of the glandular structure of the breasts.

A very effective mode of stimulating the secretion of milk is by the frequent application of the infant to the breast. This has often been effective in causing a secretion of milk not only in the breasts of recently delivered women, but in originating a flow of milk in the breasts of women who have never borne children or are too old to do so, as well as in the breasts of men whose mamminæ are naturally ill-adapted to that purpose.

Gentle friction of the breasts with a warm hand increases the circulation of blood and the yield of milk in them, because milk is secreted from the vital fluid. The application of cloths wrung out of warm water acts in a similar manner. A gentle current of electricity passed through the breasts once a day often does much good. Poultices of the leaves of the castor-oil plant applied warm to the breasts, sometimes promptly and largely increase the flow of milk.

A nutritious mixed diet is the best for wet-nurses; when to that is added a bowl or two daily of warm oatmeal gruel and a plentiful supply of good cow's milk to drink at all times, if the mother's milk then be not abundant and of excellent quality, it can not be for want of suitable diet. Beer and other malt liquors are to say the least of very doubtful utility; the milk of beer-drinking nurses may be copious, but it is thin, blue, watery, and innutritious.



## THE CARE OF NEW-BORN INFANTS.

After the child has been cleansed in the usual way by the use of oil, soap, and water, it should be put to the breast as soon as the mother has enjoyed two or three hours' rest from the fatigue of labor. At this time the infant gets little or nothing from the breast; but this practice has the good effect of drawing out the nipple, stimulating the flow of milk, causing the recently emptied womb to contract and thus prevent hemorrhage, as well as affording the infant opportunity to exercise itself in the art of suckling; after a few hours a little colostrum is obtained by the infant, which, acting as a laxative, clears out of the intestines the irritating matters always present in them at birth.

Loss of blood sometimes occurs from the umbilical cord, because it has been tied too tightly with a sharp, cutting ligature, or too loosely to close perfectly the cut end of the umbilical vessels. A very small oozing of the vital fluid will destroy a young infant. Under these circumstances another ligature should be applied immediately, or the cord should be pinched tightly between the fingers, and the doctor promptly called.

Perfect cleanliness is essential to the health of an infant; for this purpose the warm bath is necessary, but it should be used with discretion in special cases. Vigorous infants may be bathed night and morning with decided benefit, but feeble children should never be bathed more than once a day; while in many cases, simply sponging the skin with warm water will sufficiently cleanse the child and not unduly depress its vitality by the too free use of water.

The lives of infants born at the seventh month may often be preserved by oiling them daily with olive-oil, and keeping them wrapped in cotton wadding for one month or



longer after birth. Before birth the lungs are fully developed and perfectly adapted to begin the process of breathing which is to continue without cessation throughout life; but the delicate tubes and air-cells are closed, rendering the whole structure of the lungs as solid as so much liver until the first few gasps after birth open them up. Breathing is usually established as soon as the head is born; but sometimes this does not occur, and the child lies as if dead, and, in fact, will quickly die if respiration be not established when the mother's blood ceases to flow to the child, as shown by the cessation of pulsation in the cord.

The child may not breathe at birth because it is too feeble to do so without assistance; the cord may have been pinched during the birth; or the child may be temporarily paralyzed by severe pressure during labor. Protracted labor, the presentation of the hips, legs, or arms, or any cross-birth, are apt to render the establishment of breathing tardy in the new-born.

Prompt treatment is necessary if the child is to be saved from impending death.

Wrap a soft rag around the finger and rapidly clean the child's mouth and throat from any mucus that may obstruct the windpipe. If the surface of the child's body be bluish-purple, showing great congestion, much good may be done by allowing from one-half to one teaspoonful of blood to escape from the cut end of the cord. Brisk rubbing of the body, slapping the hips, blowing in the face, sprinkling cold water on the infant's face and chest, dipping the child alternately for a second or two in a cool and warm bath should be tried in quick succession. Should none of these methods succeed, then artificial respiration must be tried in the following manner: Place the child on its back, grasp the tongue with a soft cloth, draw it out



of the mouth, and bend it down over the lower lip: this is done to open the windpipe and keep it open; then close the child's nose by pinching the nostrils gently. Now let the operator place his mouth over the infant's mouth and blow steadily into the lungs for a few moments until they are fully inflated; then cease blowing and compress the sides of the chest to expel the air; repeat this movement about eight or ten times each minute until free respiration shall have been established. No case of this sort should be abandoned as hopeless until treatment has been continued at least half an hour; because success often rewards persistent endeavor in apparently hopeless cases. Very frequently a soft fluctuating swelling may be observed on one side of the new-born infant's head, due to an effusion of serum between the scalp and the pericranium; it is usually filled with serum, but sometimes contains a little blood. Although this lump is caused by the pressure to which the head has been subjected during the birth, it does not form at those parts where the pressure has been applied, but at the place where there has been little or no pressure. These swellings are quite harmless—no injury ever arises from them; they usually disappear totally in a few days without any treatment whatever.

#### ARTIFICIAL FEEDING.

When a mother is unable to suckle her child and a suitable wet-nurse can not be procured, artificial feeding is the only alternative. When this method of alimentation is properly understood and carefully carried out in all its details, very excellent results can be attained; but when the duty is confided to ignorant and slovenly nurses, the life of the infant is almost uniformly sacrificed. Mother's milk



is exactly adapted to infant nourishment, as it contains all the elements of nutrition in the proper proportions.

In order to be successful with hand feeding, food that closely resembles mother's milk must be used. Goats' and asses' milk, in some respects closely resemble mother's milk, and have therefore been recommended for infant feeding; but these fluids are not readily procured, and we are usually obliged to use cow's milk, which, all things considered, is quite as good—in some respects superior to either.

The chief objection to cow's milk is that it contains a much larger proportion of cheesy matter than mother's milk. This forms in the child's stomach a dense, hard curd which is digested with great difficulty; on the other hand, the curd of mother's milk is loose, flocculent, and therefore easily digested.

A very satisfactory food for infants may be prepared in the following way: Take one quart of good, pasture-fed cow's milk, allow it to stand in a tall vessel for two or three hours, until a part of the cream rises to the top, then remove the upper half. When the latter is properly diluted and sweetened, it resembles mother's milk very closely, in its proportion of cheesy, fatty, and saccharine ingredients. The proper fluid for diluting such milk may be prepared by boiling for fifteen minutes one or two teaspoonfuls of Robinson's prepared barley flour in one pint of soft water. For a young infant, equal parts of milk as above directed and this fluid should be mixed and slightly sweetened with cane or milk sugar, the latter being preferable. The boiled barley flour serves the very important purpose of preventing the cheesy part of the milk from coagulating in hard, indigestible lumps in the child's stomach; the curd is thus rendered loose and flaky, and is therefore easily digested;



dyspepsia, colic, flatulence, and bowel disorders are prevented by the use of this admirable food.

Milk used for infants' food should be rendered alkaline by the addition to each quart of a large pinch of the bicarbonate of soda or a little lime water; its keeping qualities are thus improved and its digestion is rendered easier. The milk of several cows mixed together gives a better average quality than any one cow's milk, and is to be preferred. Infants' food should be warmed to about blood heat; it is apt to cause indigestion and diarrhœa if it be either much warmer or colder. Infants up to the age of six weeks rarely take at one time more than two ounces of food; if a larger quantity be prepared than the child can use, it must be thrown away—never warmed again for the next meal. The rubber nipples used on nursing-bottles should have very small holes, both for the purpose of preventing the liquid food flowing into the infant's stomach too rapidly and to afford him the wholesome exercise of sucking as hard as if nursing from the breast. After a nursing-bottle has been used it should be immediately emptied and washed clean, then immersed in a quart of cold water in which one teaspoonful of baking soda has been dissolved. Condensed milk is not superior nor equal for infant food to fresh pure milk from healthy, well-fed cows. Infants below the age of three or four months have very little power to digest farinaceous food; therefore, corn-starch, arrowroot, crackers, bread, oatmeal, etc., should not be fed to infants until they have passed that age. The food recommended by the celebrated chemist, Baron Liebig, is excellent, being digestible and nutritious. The following is the best way to prepare the food:

Mix half an ounce of wheaten flour, the same quantity of malt flour, seven grains and a quarter of bicarbonate of



potassium, with one ounce of water; five ounces of cow's milk are then to be added and freely stirred, and the whole set over a gentle fire. When the mixture begins to thicken it should be removed from the fire and stirred for five minutes, gently heated and stirred again until it becomes quite fluid, and then heated to the boiling point. After the bran has been strained out and cooled to the proper temperature it is ready for use.

At every drug-store a variety of infants' food may be obtained, most of which have been prepared after the above formula.

#### MEASLES.

This disease is so common that very few children escape its influence. It often occurs in epidemics, which differ notably in their degree of virulence: at one time all who are attacked get well; at another, not a few children may die. When measles is fatal, it is so generally through the complications by which it is attended; the malady itself is rarely fatal. Usually a child is attacked only once, still some suffer from the second or even the third seizure.

This disease is due to a specific poison which seems to be communicated through the patient's breath and from the skin. A child sick of measles seems to be capable of infecting well children from the beginning to the end of the attack.

*Symptoms.*—The poison of measles remains latent in the system after its reception about ten or twelve days. This is called the period of incubation. The first symptoms manifested are those of an ordinary cold. The child sneezes and coughs; his eyes become watery, red, and weak. There are fever and headache; food is refused, the child feels ill and languid; the nose may bleed, the throat be-



come inflamed, and the chest sore. If the fever be high the child will be restless, and he may be slightly delirious, especially at night; convulsions may occur.

The peculiar eruption occurs, usually, on the fourth day; it may appear on the third, or be delayed until the fifth. The bowels generally become loose at this time, if they have not been so before.

The eruption is first observed about the chin, temples, and forehead, as slightly elevated yellowish-red spots, which disappear under pressure. In about twenty-four hours it spreads over the whole surface of the body. In less than forty-eight hours it begins to fade; the completion of this process is followed by the shedding of the scarf skin in fine, dandruff-like scales.

In fatal cases there is great prostration; the pulse is small, feeble, and frequent; the breathing rapid; the tongue dry, brown, thickly coated; the muscles are tremulous; there is always delirium, and often convulsions.

*After-consequences.*—A mild attack of the measles is a simple matter, and the child is to be congratulated, when complete recovery has occurred and subsequent immunity probably been attained; but if the attack has been severe or the child previously delicate, a long time may elapse before the “dregs” of the measles can be eliminated from the system and the child’s health quite re-established. Chronic sore throat and obstinate coughs are often developed; the child is left pale, weak, thin, and bloodless—just in the physical condition that strongly favors the approach of consumption, diphtheria, scarlet fever, etc.

*Diagnosis.*—Before the peculiar eruption appears it is not easy to distinguish between a severe cold and an attack of the measles. If the latter disease happen to be epidemic



at the time, the chances are that any child manifesting the symptoms of ordinary cold with fever will soon show the eruption of measles. The eruption of rose-rash often strongly resembles that of measles, but there is no fever with the former; this is very rarely absent in measles.

*Prognosis.*—In estimating the chances of recovery of those attacked with measles, the character of the epidemic, if there be any, must be taken into account. In some epidemics the percentage of deaths is much higher than in others. The constitutional vigor is an important consideration; it is not difficult to help a child of ordinary constitutional stamina through an attack of measles without danger to life, but it is often impossible to prevent the general health being seriously, perhaps permanently, injured. Scrofulous children are commonly worse after an illness of this sort. In children under three years of age, bronchitis, with chronic cough, often follows; should a fresh cold be caught this condition may develop into a severe acute inflammation of the lungs. If the child have a latent inherited tendency to pulmonary consumption an attack of measles may start it into fatal activity.

*Treatment.*—Measles, like all the other eruptive fevers, passes through certain well-defined stages toward recovery. The object of treatment is, therefore, not to cut short the disease—which can not be done—but to conduct the patient safely through it. Active medical treatment is needed more frequently than for the original disease. Rest, pure air, warmth, mild drinks, and light nourishment are the chief requisites in ordinary cases. When symptoms of cold appear, at a time when measles are epidemic, the child should be kept indoors; if there be fever, it should be put to bed; light, digestible food only be allowed. Thirst may



be relieved by barley-water, cold water, weak lemonade, or bits of ice put into the mouth; large quantities of drink should, however, be forbidden. A thirsty, feverish child is better satisfied if it be allowed to drink the whole of a little fluid from a small vessel than when only a mouthful is permitted from a large, full goblet. Usually nothing should be done to moderate the fever until the eruption has appeared, because it is believed that a progressive but moderate fever promotes final recovery. If, however, the fever be very high, it may be safely moderated by sponging the patient all over with tepid water, without wiping, allowing the heat of the body to dry the surface.

The sponging may be repeated every fifteen or thirty minutes until the fever abates, and again used if the fever returns too severely.

The sick-room must be kept quiet and darkened, but a plentiful supply of fresh air should be secured, without causing draughts.

If the bowels be only moderately loose they must not be checked; but if an exhausting diarrhœa be threatened, the following prescription is safe, simple, and very effective:

392 R.	Solid extract of logwood.....	16 grains.
	Bicarbonate of potash .....	32 grains.
	Hot water.....	2 ounces.

Dissolve the medicines in the water; allow the solution to cool. The dose is one teaspoonful every two or three hours until the bowels be controlled. If any part of the skin be specially irritable, relief may be obtained by rubbing the spot with a bit of cocoa butter.

The air of the sick-room may be rendered sweet, and much done to destroy the special infecting principle of measles, by roasting ground raw coffee on a hot shovel every three hours, or oftener if necessary.



As soon as the eruption is out, in favorable cases, the fever falls, the tongue cleans, the appetite improves, the patient is better and becomes more cheerful. If the rash do not come out properly, a short hot-bath does much good. A little wine and water, or a few drops of whisky will be of decided service. An alcoholic stimulant sustains the strength, helps a tardy eruption to come out, and abates the fever at the same time. Delirium is best checked by the constant application to the head of cloths wrung out of ice-water.

Earache may be relieved by the application of a hot brick covered with moist flannel. Ulcers in the mouth or on the tonsils may be quickly cured by touching them with a little pure carbolic acid by means of a camel's-hair pencil.

The after-treatment is always important and should be carefully conducted if complete recovery is to be attained.

The child should be warmly clothed, flannel being worn; in very cold weather, a vest of chamois-skin over the flannel vest is excellent; clothing worn during the day must all be removed before retiring. Fresh air to breathe day and night is very important. If the appetite be poor and the little convalescent be pale and bloodless the following compound will help it notably :

393 R. Pyrophosphate of iron . . . . . 15 grains.  
 Dissolve in 2 ounces of hot water and add,  
 Tincture of gentian. . . . . 2 drams.  
 Glycerine . . . . . 6 drams.

DOSE—One small teaspoonful in water one hour after meals.

Children are the better for an afternoon sleep. For some time after recovering from measles, adults should not work hard; they must avoid late hours and exposure to night air until completely recovered. Consumption and severe



chronic bronchitis are not unfrequently excited in adults by an attack of measles.

If the little patient's eyes continue weak, watery, and unable to bear strong light, they may be strengthened by painting the eyelids and the skin around the eyes every night with the following remedy. Let it be washed off in the morning :

394 R. Squibb's solid extract conium..... 1 dram.  
Glycerine..... 1 dram.

Rub these ingredients together in a mortar. Finally, restoration to good health will be greatly promoted by giving the child a teaspoonful of an emulsion of cod liver oil with the hypophosphites of lime and soda for several months after an attack of measles.

The sick-room should be disinfected by closing every aperture and burning about four to eight ounces of sulphur in an iron pot, after which let it be aired and then thoroughly cleaned.

#### ROSEOLA (ROSE-RASH).

It is only during the last few years that this disease has been observed on the American continent. The name of the affection arises from the crimson tint of the skin. Because of its resemblance to the eruption of measles it has been called false measles.

As rose-rash is not contagious, we can not believe it to be caused by a specific poison, as some pathologists hold ; but if it be so, the venom is operative only during very hot weather ; at these times this affection may seem to be epidemic, not because one child infects another as in true measles, but because many children are then subjected to the exhaustion and irritation of great and continued heat, which are probably its true causes.



*Symptoms.*—The child is ill for several days before the appearance of the eruption. There are headache, loss of appetite, nausea, and occasionally vomiting, usually constipation, sometimes diarrhoea, always chilly sensations and general prostration. As in true measles, the eruption appears about the face first and soon spreads all over the body; it occurs in the form of rose-colored spots or patches, which are not elevated above the skin; the color readily disappears, momentarily on pressure. It fades in about forty-eight hours, the skin then assuming its normal color.

*Treatment.*—If the bowels be slightly loose, nothing should be given to check them; but if constipated, they should be moved by means of castor-oil. The food should be light and digestible. Ice-water, barley-water, or weak lemonade, slightly sweetened, may be given freely. The fever is often quite severe and should be kept in check by sponging the skin all over with tepid water every fifteen minutes; this affords prompt relief, refreshes the patient, and removes the feverish condition of this affection better than any internal medication. Rose-rash is never fatal and entails none of the evil consequences that are caused by genuine measles.

#### SCARLET FEVER—SCARLATINA,

are terms that designate an acute eruptive fever due to a specific poison which is always the immediate cause in every case, whether the source of the infection can be traced or not.

It usually attacks children, but persons of adult age are liable thereto; advancing years, however, reduces the susceptibility. It is highly probable that all the disease-producing specific poisons are harmless against vigorous persons in good health; these morbid influences find a soil



suitable for their germination in the systems of those whose health has been injured by bad drainage, the foul air of dark, close rooms, indigestible food, and other depressing influences. Wherever these conditions surround children, there scarlet fever finds its victims.

A child ill of this disease can communicate it to others during the whole period of the illness, and probably can do so for six weeks or two months after convalescence has been established.

During all this time infection may be received by clothes or near surfaces and retained for months unless destroyed by cleansing and disinfection.

After the reception of the scarlet fever poison the disease declares itself in from three to five days; it may do it in so short a time as three hours. If any child who has been exposed to the infection of this disease remains well one week after being removed from its influence, no danger from that source need be feared.

*Symptoms.*—This disease rapidly declares itself. The fever is not usually preceded by rigors; chilliness is, however, always present. Paleness, languor, dizziness, drowsiness by day, restlessness, starting, delirium, aching of the limbs, headache, sore throat, and vomiting may be observed in varying degrees of intensity in every case.

The glands at the angle of the jaw are enlarged. The throat and the tonsils are red; the tongue is furred and red at the edges and the tip. Shortly after the throat becomes sore a fine reddish flush suffuses the neck and chest.

The eruption generally appears on the second day and has extended to the whole surface by the third, or it may be delayed, suppressed, or recede after being well defined. The eruption first appears as fine red points closely spread over a large surface; they are brightest at the centre and



fade into each other so as to redden the skin between the specks; they are not elevated above the surface. Pressure causes the color to disappear for an instant. The eruption reaches its height by the fourth day and fades on the fifth and sixth. The skin begins to peel off and be renewed from the sixth to the ninth day.

Sore throat is one of the earliest symptoms of scarlet fever, and it continues throughout the whole duration of the disease; the tonsils are swelled and covered with a sticky excretion. These conditions and the distress they produce are worse during the first few days of the illness, but in favorable cases begin to subside as the rash appears on the skin. In severe cases ulceration of the tonsils and adjacent parts of the throat may occur. The fever commonly continues high throughout the disease and does not quite subside until the second week, the thermometer showing that some fever lingers after the eruption has faded.

The symptoms that denote an unfavorable result are: convulsions, drowsiness, restlessness, high fever, rapid pulse, duskiness of the eruption, feeble circulation, severe and persistent vomiting, and diarrhœa.

*Treatment.*—It is universally conceded that the progress of scarlet fever, when its poison has once secured access to the system, can not be either shortened or aborted. As the disease is very infectious, it is of the utmost importance in preventing the spread of the disease, to remove every well member of the family as far as possible from infection. The patient should be placed in a separate room and no person but the physician and the necessary attendants be allowed to enter or to touch the bedding or clothing used in the sick-room until they have been thoroughly disinfected.

Various medicines have been claimed to possess the power



of preventing well persons being infected by the specific poison of scarlet fever, when exposed thereto. None possess any such virtue except, perhaps, arsenic. It is well known that while taking arsenic in medicinal doses a person can not be successfully vaccinated. From one to three, or at the most five, drops of Fowler's solution of the arsenite of potash may be given in water three times a day, after meals, to children from two to twelve years of age, who are unavoidably exposed to the influence of the scarlatinal poison. But the use of this drug should not take the place of complete isolation of the well from the sick, nor the diligent use of disinfectants. The patient should remain in bed until the fever has entirely abated, and he should not leave the room until the skin has ceased to peel off.

While the fever is high the temperature of the room should be kept at about 60 degrees, but after the fever has subsided the room should be warmed to about 70 or 75 degrees.

As the various stages of scarlet fever must follow each other in regular succession the objects of treatment must be to guide the patient safely through the disease. To do this successfully several cardinal points must be carefully kept in view. The fever must be prevented from rising to a dangerous point. The elimination of the poison from the system must be promoted and the patient's strength should be sustained. When the temperature does not exceed 103 degrees there is little danger from that source; but if the fever heat reach 104 degrees or higher the patient's strength is rapidly exhausted, and a temperature of 107 degrees is quickly fatal.

The proper use of tepid water is by far the safest, most effective, and, at the same time, the means most grateful to the patient for reducing excessive fever of any known method.



Some medical men have condemned the use of water because good effects were not obtained by placing a frightened little fever patient in a bath at 50 or 60 degrees and keeping him there until his teeth chattered.

A mixture of three parts water and one part cider vinegar, or of eight parts water and one part alcohol, may be taken at a temperature of 70 degrees; with either of these liquids the sufferer's skin should be sponged every fifteen minutes when the fever is high until it be reduced three degrees or more. After the sponging the skin should not be dried; the heat will rapidly evaporate the moisture. The application of cloths, wrung out of ice-water, to the head and to the throat from ear to ear rapidly abstracts heat from the blood and reduces the fever, and, at the same time, favorably influences both the brain and the throat internally. If the patient be too weak to bear the fatigue of repeated sponging, cloths wrung out of water, almost or quite ice cold, applied to the abdomen and frequently changed, are promptly effective in diminishing fever.

The throat symptoms usually require attention from the first. Bits of ice, allowed to dissolve in the mouth, afford great relief. In all cases, cleansing and disinfection of the throat is of the utmost consequence. The foul matter that bathes the parts contains the scarlet fever poison, which, if it be not removed and the throat frequently disinfected, will be absorbed back into the system and greatly increase the gravity of the case—perhaps cause a fatal result. Gargles are useless, because, even if a sick child could use them, the medicated liquid never reaches the back part of the throat at all. A hand-spraying apparatus is very effective. The following preparations, sprayed into the throat every hour, or, in severe cases, every half-hour, will destroy the fever poison and exert a healing influence on the diseased membrane:



- 395 R. Labarraque's solution of chlorinated soda . . . . 1 ounce.  
 Soft water . . . . . 19 ounces.  
 Mix by shaking.

The following solution is, perhaps, the most powerful of all known disinfectants; it has special power in the destruction of poisonous excretions, and is one of the latest and best remedies for cleansing the throats of scarlet fever patients. It should be used only under the direction of a physician :

- 396 R. Bichloride of mercury . . . . . 1 grain.  
 Muriate of ammonia . . . . . 2 drams.  
 Rub the ingredients together in a mortar and  
 dissolve them in soft water . . . . . 8 ounces.

The kidneys form one of the chief avenues by which the fever poison is expelled from the system; they must be kept at work through the whole course of the disease. If the urine be scanty and high colored, no time is to be lost in stimulating the kidneys. The following preparation is well adapted to answer the purpose :

- 397 R. Spearmint . . . . . 1 ounce.  
 Hot water . . . . . 1 pint.  
 Infuse one hour, strain and cool; then add  
 acetate of potash . . . . .  $\frac{1}{2}$  ounce.  
 DOSE—One teaspoonful every hour, until it acts; then  
 every three or four hours.

Severe earache may be relieved by the application of a bit of brick heated, covered by a damp flannel and applied to the ear. If relief be not obtained by this means the drum of the ear usually requires to be punctured by a surgeon to allow the escape of matter which sometimes collects inside of it. If any discharge of matter continues from the ear after recovery, it must be treated until cured, because it will never cease without skillful treatment; the



child will never outgrow the discharge; it is much more likely to grow worse, and sooner or later destroy the hearing and may cause fatal inflammation of the membranes of the brain.

The diet should be limited at first to milk and other liquid food; eggs and beef tea may be given as soon as more nourishment is demanded. Lemon-juice, oranges, and the pulp of grapes are good. The skins and seeds of the latter should be rejected. Warm baths with an abundant use of carbolic soap for several successive days should be used before the patient is allowed to leave the sick-room.

The patient should be protected from cold, and the action of the skin promoted by warm clothing for a considerable time after recovery from an attack of scarlet fever.

If the urine become scanty and smoky-colored, and the little patient dropsical, the kidneys are becoming diseased, and no time must be lost in getting the skin into active condition by hot-air baths or by placing him in bed surrounded by bottles of hot water. A few doses of the compound jalap powder, consisting of ten or fifteen grains each, should be given. Severe or prolonged purging should, however, be avoided, as it rapidly reduces the patient's strength. At this period two or three full doses of quinine, twelve hours apart, often work the most marvellous improvement; eight grains is the proper dose for a child of twelve years, for younger children in proportion. A small wine-glass of Rockbridge alum spring-water should be given three times a day for several weeks. Finally change of air, with small doses of prescription No. 393, and emulsions of cod liver oil do much to promote complete recovery.



## COW-POX—VACCINIA.

This is a mild eruptive disease that naturally occurs only among cattle. It possesses, however, surpassing interest, from the fact that when artificially transferred from them to the human species it sets up a mild disease by which the susceptibility to be infected by small-pox is all but obliterated.

For a long time before vaccination was practiced as a protective measure, it was generally believed among the farming population of England that milkmaids who became accidentally vaccinated from milking with chapped or wounded hands, cows that had cow-pox took the disease from the animals, and that they were thereby protected from the then dreaded disease of the small-pox. Dr. Jenner, of Gloucestershire, England, toward the end of the last century showed this to be true; hence the modern practice of vaccination.

*Symptoms caused by vaccination.*—When pure lymph from a cow-pox vesicle is inserted beneath the skin, no effect is observed until the end of the second or beginning of the third day; then, if the vaccination be effective, a small red pimple will be observed. By the fifth or sixth day this has increased in size and become a vesicle of bluish-white color, with raised edges and central cup-like depression; at the eighth day it has attained its perfect development; it is then round, plump, pearl colored, and distended with clear lymph; its margin is firm and its central depression well marked. A ring of inflammation, called the areola, now begins to spread around the base, the vesicle enlarges, and the areola enlarges for the next two days; after the tenth day the areola begins to fade and has disappeared in two or three days more; with the disappearance



of the inflammation the vesicle begins to dry from the centre to the circumference, forming a scab, which falls off about the twenty-first day, perhaps a day or two later, leaving a permanent scar.

*Irregular development of the vaccine pustule.*—Each vaccine vesicle consists of a number of small vesicles. When more or less of these are accidentally broken the inflammation is increased by the injury, matter forms, and a large yellowish scab is developed instead of the characteristic vesicle. The protective power of vaccination is, however, not destroyed by the irregular development of the vesicle by violence.

In scrofulous children or those in bad health the inflammatory process sometimes becomes excessive, and may go on to the formation of an abscess, greatly increasing the usual constitutional fever and languor.

Sometimes erysipelas is developed at the point of vaccination; when it does so, the protecting power of the operation is destroyed. Erysipelas may occur because of impure virus, but it commonly arises from other sources, as very great care is exercised in the collection of virus. Syphilis may be communicated when the lymph used is from some other child; but this loathsome disease can not be implanted in the system if the virus employed be taken from a healthy heifer, as is usually done. Vaccination not unfrequently fails, the failure being due to the improper performance of the operation, the uselessness of the lymph, or perhaps the individual is not susceptible to the vaccine disease. Some persons take vaccinia only after repeated vaccinations, because of some peculiarity in the system at the time. No protection against small-pox is afforded by simply producing a sore at the vaccinated point. A specific pustule going through all the stages of the vaccine dis-



ease is necessary to afford protection against the small-pox. Many parents think their children have been vaccinated, when nothing but a sore has been caused on their arms by scratching and the rubbing in of some useless or irritating matter.

Vaccination should be performed, usually, before the end of the first year,—earlier if small-pox happen to be epidemic.

The protection afforded by vaccination gradually diminishes by time, but is probably never entirely lost; this is proved by the fact that the longer the period that has elapsed since the first vaccination, the greater the number is who can be vaccinated a second time successfully.

In order to make the protection against small-pox as complete as possible, a second vaccination may be attempted about the eighth or tenth year, and a third between the fifteenth and twentieth years.

#### CHICKEN-POX—VARICELLA.

This disease is usually confined to children between the ages of two and eight years. It commonly occurs in epidemics, being of a highly infectious character. Before the disease had been as well studied as at the present time, it was believed by many to be a modified form of small-pox; but it is now known to be a distinct disease, largely from the fact that it can not be transmitted by inoculation like the former disease.

*Symptoms.*—Chicken-pox does not declare itself until ten to fourteen days after infection. The first symptom is fever, within twenty-fours after the occurrence of which about fifteen or twenty rose-red spots appear, scattered irregularly all over the body; these are elevated above the



skin, and rapidly change from pimples to minute blisters, filled with a clear watery fluid. Every morning a fresh crop of spots appears, to be in their turn converted into blebs. After appearing in successive crops for four or five days, fresh spots cease to be seen. The clear contents of the blebs change in forty-eight hours to a milky appearance. As the spots are accompanied by considerable irritation, they are often ruptured by scratching,—in which case a crust forms, which, however, falls off in a few days, leaving no pitting such as results from small-pox. This disease lasts about two weeks, reckoning from the beginning of the fever until the fall of the crusts. Although chicken-pox is not a serious disease, it often leaves a child in a condition of debility which may last a long time, and lead to the development of grave chronic diseases of a scrofulous or tubercular nature.

In rare cases the spots do not dry up and fall off in the usual manner; the inflammation around the blebs spreads and soon forms ulcers, which continue to enlarge until the little patient succumbs.

*Diagnosis.*—An intimate acquaintance with the appearance of the eruptions of various eruptive fevers is often necessary to enable the observer to determine the nature of this disease. The following points will assist in forming a correct opinion. If the eruption rapidly follows the first appearance of the fever, the disease is probably chicken-pox. The eruption of small-pox does not appear for two or three days after the fever has begun, and the patient suffers from severe pain in the back, headache, and vomiting. The spots of small-pox occur in groups of three and five, while those of the disorder under consideration are distributed singly all over the body. The pimple of small-pox is hard—feeling as if a small shot were imbedded in



the skin—and does not disappear on pressure; that of varicella, on the other hand, is soft and fades when the skin is stretched. The matured pustule of small-pox is depressed in the centre; that of this affection is not so.

*Treatment.*—Varicella almost invariably pursues a mild course and very little is required but good nursing to see the patient safely through. While the fever continues, milk diet and other light food only should be allowed. Tepid sponging in the manner already described for scarlet fever reduces the temperature and greatly refreshes the patient. If the bowels be costive they should be opened by some gentle laxative, such as a wine-glass or two of the effervescing citrate of magnesia. After recovery, emulsions of cod liver oil and change of air do much to secure perfect restoration to health.

#### DIPHTHERIA.

When the disease now called by this name first appeared in the United States it was regarded as being a new disease, but ancient medical literature shows it was well known and described under various names nearly two thousand years ago. It is a specific, eminently contagious, and profoundly debilitating disease, which often prevails in epidemics, while in the unclean parts of most great cities it is permanently established. Poverty and the hardships that it entails, badly ventilated, dirty tenements, exposure to cold, and indigestible, innutritious food—in fact, anything that lowers the tone of the system—render children liable to and increase the malignancy of this disease if they be attacked. Scrofulous children and those one or both of whose parents are consumptive, are unusually liable to diphtheria. Measles, whooping-cough, and scarlatina leave



the system in a condition prone to be readily affected by the specific poison, the effects of which are under consideration. Women who have been recently delivered readily receive the diphtheritic infection; therefore, they should be very carefully isolated when the disease exists in the vicinity. In them the disease usually pursues a severe and irregular course.

Diphtheria commonly occurs in children between the ages of two and ten years, but it has been observed during early infancy, and at all periods from that to advanced years. Although it is not a hereditary disease, like scrofula, syphilis, or consumption, yet there seems to be in certain families an inherited tendency to its ready reception.

Like all diseases arising from a specific infectious principle, diphtheria runs a definite course, in the milder forms, going through all its stages in from eight to ten days, one case differing from another chiefly in the varying intensity of the symptoms. Cases that occur at the beginning and during the decline of epidemics are apt to be of a milder character.

After its reception into the system the infection may remain latent, causing no symptoms for a period varying from two to eight days, the variation being probably due to the condition of the child's blood, with the virulence and amount of the dose. Some facts tend to show that the diphtheritic poison may remain dormant in the system for many weeks, until called into activity by favoring circumstances. It is not always possible to detect a case of diphtheria at the very outset. Preceding the specific symptoms the child may have slight fever, sleepiness, debility, loss of appetite, diarrhœa, paleness, cough, and hoarseness; but as all these may precede other grave diseases, or even a simple



cold, we can not be sure of the diagnosis. In other cases grave symptoms may be developed at the very beginning: the child becomes suddenly quite ill, and on inspecting the throat it may be already covered by the false membrane. Sometimes the little sufferer dies on the second or third day, destroyed by an overwhelming dose of the poison before the diphtheritic membrane has formed or the specific symptoms have had time to appear.

*Symptoms.*—In addition to the initial symptoms already mentioned, the formation of false membrane is very distinctive; it commonly occurs on the tonsils, in the throat, windpipe, or bronchial tubes; but it not unfrequently forms in the nostrils, vagina, womb, rectum, eyelids, or on a wound or ulcer; besides these the most constant symptoms are profound prostration, the presence of albumen in the urine, fever, eruptions on the skin, enlarged glands, and, at a later period, paralysis of various parts. False membrane always occurs in every case, except the patient die before it has had time to form. When albumen exists in the urine it may be detected by boiling that liquid in a clean vessel; if a coagulum separates, it is composed of albumen; the urine may, however, on being heated, become milky; if the urine become clear on the addition of a little nitric acid, it is due to phosphates. Albumen is not a sign of special danger. The eruptions of diphtheria are much less distinctive than those of measles, scarlet fever, or small-pox; in fact, they sometimes resemble the early stages of all these several eruptions, and may be not unlike the hives. They seldom continue more than three days, and are sometimes visible only for a few hours. Because of the inferior vital stamina of young infants they are very liable to die if attacked by diphtheria, and the narrowness of the throat and windpipe during infancy exposes them to the danger of



suffocation by the false membrane which often rapidly forms in these passages.

*Treatment.*—Diphtheria being an extremely infectious disease, every precaution should be taken to prevent its spread, which have been already detailed in cases of scarlet fever. All upholstered furniture, carpets, rugs, and curtains, should be removed from the room. Only the necessary articles of wooden furniture should be allowed to remain. All discharges from the patient must be instantly disinfected by receiving them into vessels containing a suitable quantity of the following prescription:

398 R. Labarraque's solution of chlorinated soda....2 ounces.  
Soft water.....1 pint.

By this means they are at the same time both deodorized and disinfected. Roasting a little raw ground coffee on a hot shovel is a very excellent method of purifying the air of a sick-room; but no means for this purpose should be relied on to the exclusion of the best attainable ventilation. Water containing twenty drops of strong carbolic acid to the pint, kept boiling, so that the steam shall escape into the room, is believed to aid in preventing the attendants being infected by the diphtheritic poison.

There is no disease that produces depression of strength so profound as diphtheria; therefore, well-considered measures must be taken to keep up the powers of life and prevent dissolution of the blood, by feeding the patient with plenty of easily assimilated food and stimulants, too—the latter being signally useful.

The temperature of the room should be kept at 60 degrees by admitting fresh air, and the quantity of bed covering must be adapted to keep the patient comfortable, but not too warm in that cool atmosphere. An open grate fire



is an excellent ventilator. The sick-bed must be protected from draughts. Although an adequate quantity of food is needed, nourishment must be given with great caution while the disease is reaching its height; digestion and assimilation are then feeble and must not be overtasked. The desires of the little patients are to be measurably respected; to unduly press a sick child to take food when it is regarded with loathing is injudicious, and to use force is both cruel and dangerous.

The little patients can usually be persuaded to take enough nutriment by offering them, at frequent intervals, a teaspoonful of milk or strong beef-tea, and when we fail, enemmas of beef-tea containing a few drops of brandy are the proper resource. An article of diet admirably adapted to support the strength of patients suffering from any sort of depressing disease, may be prepared as follows: Take a tender beefsteak, broil it underdone, then with a sharp knife scrape it down to a pulp; mix two or three grains of pure pepsin in every tablespoonful of the beef pulp, and feed it to the patient in divided doses. One grain of pure pepsin, mixed with about three ounces of milk, greatly assists its digestion and assimilation.

It can not be denied that alcoholic stimulants are of surpassing value in the treatment of diphtheria. Under their judicious use many sufferers recover who would certainly die without. Stimulants are a potent means of supporting the powers of life during the height of the disease, especially when enough nourishment can not be taken or retained. Large quantities of stimulants are often required; a teaspoonful of bourbon whisky diluted with water being given with great benefit every half-hour, day and night, to a child five years of age. Wine whey is an excellent form of stimulant for sick children. It may be made by mixing



equal parts of dry catawba wine and fresh milk; heat the mixture over a slow fire until the milk coagulates; strain out the curd and give the whey freely. It is both nutritious and stimulating. When there is great nausea the stomach should be completely rested for about twelve hours, and the patient supported by nutritive enemata as already mentioned. When the nausea has subsided one of the following powders given in a little water about half an hour before food, will soothe the stomach and assist it to retain necessary nutriment:

- 399 R. Oxalate of cerium.....20 grains.  
 Sugar of milk.....40 grains.  
 Triturate together.  
 Divide into ten powders.

It is extremely important that the false membrane which forms on the tonsils, in the throat, and in the windpipe be dissolved, and the foul matter containing the diphtheritic poison be thoroughly disinfected; if this be neglected, the excreted poison will be absorbed back into the blood and notably reduce the chances of recovery.

Lime-water combined with carbolic acid as in the following prescription forms a liquid having a very powerful solvent action on the false membrane, and at the same time perfectly deodorizes and disinfects the diphtheritic poison as soon as it is thrown out on the mucous membrane covering the throat and tonsils.

- 400 R. Strong carbolic acid .....30 drops.  
 Lime-water..... 8 ounces.  
 Mixed by shaking gently.

To be sprayed into the throat with a hand-spray apparatus, every hour or every half-hour when the false membrane forms rapidly.



Swabbing out the throat with strong caustics being painful, is always resisted vigorously by young children, and should not be attempted for that reason as well as because it is much less effective than the spray.

There are no medicines that do so much toward supporting the strength of little patients struggling with diphtheria as iron and quinine. Their value is specially apparent during the decline of the disease and after convalescence has begun. The following is a very good preparation and may be given with decided benefit for a considerable time :

401 R. Tincture chloride of iron..... 1 dram.  
Sulphate of quinine.....20 grains.  
Glycerine..... 1 ounce.  
Water..... 3 ounces.

One teaspoonful in a dessertspoonful of ice-water or milk, every three hours for a child five years of age.

In not a few cases of diphtheria, paralysis of various parts of the body is developed after convalescence has begun; sometimes the loss of muscular power does not make its appearance until two or even three weeks from the beginning of the illness. Strychnia is the remedy commonly employed, and about as often fails to do any good. The muscular jerkings caused by full doses of this powerful drug do not resemble normal muscular contraction. A cure of diphtheritic paralysis can be attained most surely and speedily by fresh air, and plenty of it, cod liver oil, iron, the careful use of electricity, and better perhaps than any other single remedy, rubbing the paralyzed parts with a warm strong hand.

The fatal disease known as membranous croup, is identical with severe diphtheria, except that the former is characterized by a very extensive formation of false membrane, not only in the throat, but down into the windpipe, and in some cases even into the bronchial tubes. It requires the



same treatment as the severest forms of diphtheria, except that special care must be taken to keep the throat free, by dissolving the false membrane which forms so rapidly in this disease, and kills the patient by suffocation.

#### WHOOPING-COUGH—PERTUSSIS.

This is perhaps the most actively infectious disease of all those to which children are exposed. It is communicated from one individual to another by a specific poison, which, when received into the system of those who are susceptible to its influence, always produces a definite series of symptoms that vary in different persons, not in their nature, but in their intensity only.

Whatever the precise nature of the poison may be, it is known to exist in the breath, and in the matter expectorated by those suffering from the disease; the violent cough aiding in its diffusion.

The infection is often received along with that of measles, but, curiously enough, it does not produce its characteristic symptoms until the influence of the latter poison has declined.

The disease is easily propagated by clothing that has been about the sick. It may be carried from house to house by visitors who are themselves incapable of catching the disease, having previously suffered from it. Infectious particles may cling for a long time to the clothing of children recovering from the disease. Whooping-cough prevails so extensively among children that it is rare to find any one at the age of fifteen who has escaped. It usually attacks children before eight years of age; but adults who have not been attacked during childhood may be affected, in which case the disease passes through all the usual stages. It is



very fatal to young infants; the younger the child, the greater the danger of an unfavorable termination.

After the infection has been received, it remains latent in the system from four to ten days. Usually some cough and fever occur between the fourth and seventh days after infection; but the characteristic whoop does not usually make its appearance for another week, and young infants may die before it is developed at all.

*Symptoms.*—These may be conveniently divided into three stages: the first, in which an ordinary cold has apparently been caught, which, along with a nervous element, produces the second stage, that of spasmodic cough, and lastly the stage of decline. It is impossible to distinguish whooping-cough with certainty from an ordinary bronchitis before the development of the peculiar whoop; after that all doubt ceases.

During the cough the current of blood through the lungs is obstructed, the face becomes swollen, and the nose often bleeds. The cough commonly increases in severity until the third week of the second stage. It frequently occurs when the child is quiet or even asleep; but exertion or any annoyance is apt to cause the child to suffer a paroxysm of coughing. In favorable cases the stage of decline does not last longer than two or three weeks. After complete recovery has been attained, it frequently happens that spasmodic cough reappears under special excitement.

Diarrhœa and obstinate vomiting are very dangerous complications of whooping-cough. Before the treatment of convulsions attending the disease under consideration was as well understood as at present, children almost always died who were attacked with either or both the internal or external varieties.

Convulsions, although an alarming symptom, are not



dangerous to life so long as a child readily recovers consciousness after an attack ; but a fatal result is imminent if he does not rally quickly, but remains semi-comatose or drowsy for a time after the convulsive seizure. Bronchitis, with difficulty of breathing, especially when the inflammation of the mucous membrane extends down to the small bronchial tubes, or if pneumonia occur, are dangerous complications of whooping-cough.

*Treatment.*—There are no remedies known by which the progress of whooping-cough can be quickly brought to a close and health re-established. As the disease is of long duration, and the sufferer a child, it is of special importance that every possible hygienic precaution should be taken to guard against unwholesome conditions. Rest, warmth, pure air, and careful nursing are necessary throughout the illness. Indigestible food, especially at supper, is one of the most potent means of exciting the accessions of fever so frequent in the progress of whooping-cough. The diet must be light but nutritious ; good milk should form a staple article at almost every meal. Both ripe and stewed fruit may be given freely.

When severe fits of dry coughing occur, the following simple remedy will soothe the cough, loosen the mucus, and secure the little patient better sleep at night :

402 R. ' Wine of ipecacuanha..... 1 dram.  
Sweetened water.....1½ ounces.

To be given in teaspoonful doses every half-hour until the cough abates or nausea be caused.

The annexed preparation is a more active sedative than the preceding. It secures prolonged sound sleep and immunity from the cough. It is specially useful if there be nervous twitching of the muscles, drowsiness, headache,



and fretfulness, showing a tendency to the development of convulsions :

403 R. Bromide of potassium.....96 grains.  
Glycerine..... 1 ounce.  
Water..... 2 ounces.

One-half to one teaspoonful may be diluted with a little water and given to children from three to five years of age. If sleep be not secured in about half an hour another dose may be given safely. If convulsions occur, the proper remedy is chloral hydrate in doses of two to five grains, according to age, and repeated if necessary. I do not offer any prescription for this active medicine, because it should be used only under the immediate supervision of a skillful physician.

In the third stage, when the cough is severe, the chest full of gurgling sounds, the expectoration copious and loose, the following simple remedy often works like a charm :

404 R. Powdered alum.....90 grains.  
Glycerine..... 1 ounce.  
Water..... 3 ounces.

Dissolve the alum in the water and add the glycerine. The dose for children from two to eight years of age is from one-half to one teaspoonful three or four times a day, between meals ; diluted, if so desired, with a little water.

Some physicians rely on the subjoined preparation, used in a steam spray apparatus to the exclusion of all other treatment, in uncomplicated whooping-cough :

405 R. Chlorate of potassium..... 2 drams.  
Bromide of potassium..... 2 drams.  
Strong carbolic acid.....30 drops.  
Glycerine..... 2 ounces.  
Water,..... 6 ounces,



Dissolve the potassium salts in the water, add the glycerine and carbolic acid. Mix by gently shaking.

The child's throat should be sprayed with the above for about four minutes every three, four, or six hours, according to the urgency of the symptoms.

#### MUMPS—PAROTIDITIS.

The mumps is an acute infectious disease, accompanied by fever and swelling of all the salivary glands, but chiefly of those called the parotids, situated about the angles of the jaws.

It often occurs in children, but frequently attacks boys, girls, and young men; adults up to middle age who are much exposed to the infection and who have never before had the disease, sometimes suffer from mumps. One attack almost certainly confers lifelong immunity. It is conveyed from one person to another by some contagious principle developed in the body of the diseased person. The symptoms are manifested from eight to twenty days after the reception of the contagion into the blood. Mumps runs its course and ends in recovery in from five to ten days.

In some cases the disease makes a curious change in the scene of its active manifestations. The swelling of the salivary glands suddenly abates, while, at the same time, the testicle in the male, and the breasts, ovaries, and vulva in the female, inflame and become swelled.

*Symptoms.*—For a few days before an attack the patient usually complains of slight illness, but never manifests any symptoms more severe than languor, chilliness, fever, and, perhaps, vomiting; after these have occurred the swelling of the salivary gland is not delayed many hours. The swelling is observed at first near the ear, but it soon spreads



over the side of the face and down on the neck. As it continues increasing, the fever usually declines, but may remain in a modified form for several days. The jaws become painful on pressure, and the mouth can not be opened as usual; the sufferer, therefore, eats and speaks with difficulty. The skin over the inflamed gland may be slightly reddened, but very often there is no evidence on the integument that inflammation is going on beneath. In the majority of cases one side of the face only is affected; occasionally some days after one side has recovered from an attack of the mumps, the other side swells up and the whole process is repeated. Sometimes the diseased gland continues to manifest some degree of hardness after all other symptoms have subsided, but, after a time, that also disappears. In very rare cases this peculiar inflammation of the parotid terminates in abscess of that gland.

*Treatment.*—In mild, uncomplicated cases little is needed in the way of treatment but good nursing. While feverish the patient should be kept in bed; exposure to cold must be carefully avoided. If the bowels be at all confined they should be moved by a dose of castor-oil, which, in such cases, is the best laxative, although, perhaps, one of the most offensive to the taste. A warm, moist flannel, freely sprinkled with laudanum, applied to the gland, will abate tenderness and pain and promote sleep. If matter be about to form it must be encouraged, because it can not be prevented. Warm flaxseed poultices are to be used for this purpose; as soon as the gland is believed to contain matter, even in small quantity, the abscess must be opened to prevent the gland being destroyed. Irritating applications, like mustard plasters, should never be applied to the parotid gland when affected by this specific inflammation, because



such treatment has the effect of driving the disease to other and more important parts.

#### RICKETS—RACHITIS.

Bone is composed chiefly of two materials, an earthy and an animal matter; the former serves to give the necessary hardness and rigidity, the latter imparts toughness to the bone. These two ingredients must enter into the composition of bone in proper proportions if it is to be both hard and tough. In the bones of rickety children the earthy matter does not exist in adequate quantity; therefore, their bones bend beneath the weight of the body or are twisted by the action of the muscles, often producing deformities of a very severe character.

*Causes.*—Scrofula is not one of the causes of rickets; both diseases are quite distinct, although a contrary opinion has been held by some authorities. The air of cold, damp, badly ventilated and imperfectly lighted dwellings, strongly predisposes to the development of rickets; these, along with innutritious food, especially if the child's diet contains too little bone-forming material, powerfully tend to disorder not only the nutrition of the bones, but the impairment of the health generally; without which rickets could not occur.

*Symptoms.*—The development of this disease is often preceded by disorders of the digestive system. Vomiting occurs in some cases; the bowels are often relaxed, and the stools dark or slate-colored, evincing disease of the liver. The child is apt to sweat profusely during sleep, particularly about the head, face, and upper part of the body. Later, the whole body seems to become tender, and the patient cries if fondled. If he has learned to walk, his



gait becomes unsteady, and as the disease progresses, the power to walk may be lost altogether. He is drowsy in the daytime, and restless during sleep; often tossing his head on his pillow from side to side, so much that the hair is worn off the back of his head. He loses flesh, and that which remains becomes soft and flabby. The bowels are loose, offensive, and sometimes clay-colored. Flatulence causes much abdominal distress. The flexibility of the bones causes them to bend under the weight of the body, and because of muscular action. If the patient tries to walk his legs become rapidly and severely deformed from these causes. The head is enlarged, the seams between the cranial bones open, and the fontanelles do not close as in healthy children. The spine becomes curved, the trunk of the body distorted, and the abdomen protuberant. Rickety children can not bear cold—they are affected by it very unfavorably; if exposed to its influence they are apt to suffer from affections of the lungs and bowels, by which these delicate children often die.

*Diagnosis.*—When rickets is well advanced the disease is recognized with ease and certainty; but as the earlier symptoms may pass unnoticed or be attributed to other causes, it is very important that these should be detected at an early period, and suitable treatment applied to prevent the grave deformities sure to be developed as the disease advances.

If the teeth do not appear before the tenth month, if the wrists and joints generally enlarge, the child's head sweat during sleep, if he likes to lie naked in his cot, and the general health fail, it is highly probable that he is becoming rickety.

*Treatment.*—The disease under consideration has no in-



herent tendency toward recovery ; a favorable termination can be expected only as the result of proper treatment, which must be both hygienic and medicinal. The child must have fresh air day and night. A high, dry, sunny location in the country as a place of residence exerts a very favorable influence. The diet should be adapted to the age of the child, and must consist of nutritious food easy of digestion. Pure, rich milk should be given freely. The medicines that do most good are those containing an excess of the ingredients entering into the formation of bone ; with these must be combined remedies adapted to improve the general nutrition. The following preparations are excellent :

406 R. Cod liver oil:..... 3 ounces.

The yolk of one large egg.

Syrup of the lacto-phosphate of lime.. 3 ounces.

Lime water..... 2 ounces.

Beat the egg and the oil together ; when well blended add the syrup and the lime water ; mix by shaking.

After standing a few hours the ingredients usually separate into two layers. Therefore, the bottle should be gently shaken before measuring the dose, which is one teaspoonful after meals for a child five years of age.

407 R. Syrup of the iodide of iron ..... 1 dram.

Glycerine ..... 1 ounce.

Water . . . . . 1 ounce.

Mix by shaking. Dose—one teaspoonful after meals.

There is, however, no one method of treatment that does so much good as the rubbing of a warm, strong, gentle hand. Friction up and down the body or limbs does very little good. It should be applied by placing the open palms of the hands, one on each side of the rickety limb and rubbing it across ; at the same time sliding the hands down-



ward. Repeat the operation until the circulation is free, as shown by the parts becoming warmer and of a more healthy color. At the same time, splints must be applied to remedy existing deformities, otherwise these will be confirmed, as the yielding bones rapidly acquire strength and rigidity under the treatment here indicated.

#### SCROFULA.

This term is applied not so much to any special disease, as to a morbid condition of the system that favors the development of, and renders difficult the cure of many diseases both acute and chronic.

Scrofulous persons are often made sick by morbid agencies that produce no effect on healthy persons. When inflammation occurs in the former, it is apt to cause the deposit of cheesy matter in various parts of the body, rendering a complete cure slow and difficult.

*Causes.*—Scrofula is usually a congenital disease, but it may be acquired by children who are born free from any physical taint. The intermarriage of blood relations is, no doubt, a fruitful cause of scrofula as it is of insanity. Parents who have manifested scrofulous symptoms when children, or who are suffering from wasting chronic diseases, are very apt to have scrofulous children. If a woman be either overworked or underfed during pregnancy, she is apt to give birth to scrofulous children. There can be no question but that when certain constitutions, themselves individually quite sound and healthy, unite, they produce offspring physically very inferior to either parent, often deeply tainted with the strumous diathesis. On the other hand, there are certain constitutions which, when united, give origin to children who are superior both mentally and



physically to their parents. Scrofula is liable to be developed in healthy children by whatever influence tends to impoverish the blood and depress the health. Want of sunlight and impure air contribute actively to the production of the disease under consideration, or rouse into activity any latent tendency thereto. Severe attacks of the eruptive fevers—small-pox, measles, scarlet fever, and of diphtheria—not unfrequently throw the system into a scrofulous condition.

*Effects of Scrofula.*—One of the most constant effects of the scrofulous diathesis is the enlargement of various glands, both on the exterior of the body as well as internally. The disease popularly and aptly called consumption of the bowels, is the result of scrofulous deposits in the texture of the mesenteric glands, which discharge important functions in the assimilation of digested food. When a strumous gland is enlarged by cheesy deposit it often remains painless and indolent for a considerable time; but sooner or later, if it be not cured, it begins to soften at the centre by the formation of an abscess which opens and discharges matter, producing a running sore which heals with difficulty. The eyes of strumous children are apt to become inflamed and weak, being unable to bear the light. Discharges from the ears are common, especially after attacks of small-pox, measles, or scarlet fever. Sometimes the bones of the skull behind the ears become inflamed, the spongy part of the bone undergoing suppuration: causing a painful disease in its simplest forms, and which not infrequently ends finally in inflammation of the membranes of the brain, and death.

In other cases the periosteum of the thigh or shin bones suffers from the same destructive process, causing the underlying bone to die; the dead part acting as a foreign body,



works its way to the surface slowly by suppuration, or it is removed at an earlier period by the knife. Strumous children are apt to suffer from chronic inflammation of the various mucous membranes; that of the nasal cavities becomes inflamed, causing catarrh of the nose and throat, making them sore and developing a tickling cough with or without chronic hoarseness; or the mucous membrane of the vagina excretes pus and mucus copiously, forming infantile leucorrhœa. Hip-joint disease is very often excited in scrofulous children by a very trifling local injury.

*Treatment.*—It is a matter of very great importance that the progress of scrofula should be checked at the very beginning. When this is done effectively, the many very grave diseases that directly depend on it are prevented; the treatment should therefore be preventive and curative. Hygienic measures chiefly fulfil the former requirement; the latter must be both hygienic and medicinal. If the mother of a strumous infant be in poor health, a healthy wet-nurse should be provided. It must have an abundance of sunlight, and sleep in a sunny room. Pure bracing air is of the utmost importance; these children never thrive so well in a malarious locality. One of the gravest errors committed by the parents of strumous children, or in fact of any children, is giving them tea, coffee, and all the stimulating food very properly partaken of by themselves. The diet of delicate scrofulous children should consist of plain, nutritious, digestible food; their only drinks should be milk and water, both of the purest quality. Cod liver oil does very little good in that form of scrofula in which the patient is fat, torpid, and indolent; but those who become thin under the disease or its complications are usually signally benefited. The following preparation is both very effective and palatable:



- 408 R. White Norwegian cod liver oil ..... 4 ounces.  
Syrup of the lacto-phosphate of lime ..... 2 ounces.

Mix these ingredients by shaking, and always shake the bottle before measuring the dose, which is one teaspoonful after every meal.

It is very important that the swelled glands often seen about the necks of scrofulous children should be prevented from continuing to enlarge, soften, and go on to suppuration. They may be treated more successfully by the following than by any other known preparation :

- 409 R. Iodide of potash ..... 1 dram.  
Stramonium ointment..... 1 ounce.

Triturate the above in a mortar until they are thoroughly blended.

To be rubbed over the diseased gland several times daily.

In scrofulous inflammation of the joints or of the bones, the above mixture does excellent service. Or the skin over the inflamed bones may be painted with the following powerful compound :

- 410 R. Iodine ..... 1 dram.  
Iodide of ammonium ..... 1 dram.  
Strong alcohol..... 6 ounces.  
Glycerine ..... 1 ounce.

Dissolve the iodine in the alcohol, then add the other ingredients. It should be painted on the skin twice a day until tenderness be caused ; when this occurs cease the applications until this passes off, then resume the use of the remedy. When surgical treatment is required a skillful surgeon should be employed.



## CEREBRO-SPINAL FEVER—SPOTTED FEVER—CEREBRO-SPINAL MENINGITIS.

This disease is an inflammation chiefly affecting the membranes covering the brain and spinal cord. It usually occurs in epidemics, a large number of which have been observed in various parts of the civilized world.

We know that whatever depresses the general health favors the development of this disease; but beyond that there is a powerful epidemic influence to which attacks are directly due, and about which, so far nothing is known. There are good reasons for believing that spotted fever is slightly contagious, although a large proportion of those who are attacked are children, yet young adults not infrequently come under its influence.

In some cases the attacks are so severe that the patient quickly dies, as if overwhelmed by a large dose of some deadly poison; in others the symptoms are very mild, soon passing away, recovery occurring in a few days.

*Symptoms.*—A chill occurs at the beginning; along with this, children usually have convulsions. When these cease the patient is stupid or perhaps delirious. In severe, necessarily fatal cases, profound coma oftens succeeds the spasms. Copious and easy vomiting is an early and notable symptom. There is always pain, usually very severe, but of varying intensity. It may be in the head, neck, pit of the stomach, spine, hips, or legs. The pain shifts from place to place, but never leaves the head and spinal column. There is also profound weakness, often amounting to complete paralysis. When not suffering severe pain the patient sometimes lies in an apparently insensible condition, when he really understands all that is said to, and is done about, him. Severe vertigo is a common symptom, and



delusions are not infrequent. A child of five years, for instance, failed to recognize his mother, believing her to be some other person, although quite rational on all other topics. The surface of the body all over is sometimes excessively sensitive,—a condition that greatly increases the suffering. In some cases the joints become inflamed and swelled, as in acute rheumatism. Squinting sometimes occurs; in other cases destructive inflammation of one or both eyes is developed. Occasionally changes take place in the structure of the middle ear by which hearing is seriously impaired or totally destroyed. During the first and second weeks of the disease the skin exhibits purplish spots; these with numerous red points and occasionally large patches resembling bruises, are distributed all over the body, giving origin to the name, spotted fever. Attention to the following points will enable an observer to determine with tolerable accuracy whether a case of this disease is likely to terminate in recovery or death. When the symptoms are slowly developed and assume a mild form recovery may be anticipated in three or four weeks.

If the symptoms be suddenly developed in severe form, the skin covered by spots and discolored blotches, with great prostration of strength and insensibility, a fatal termination may occur in a few hours, and is seldom delayed beyond a week. When the attack is of moderate severity, the nervous and other symptoms being developed slowly, not very severe during the first week, delirium and stupor being absent or interrupted by lucid intervals: these cases, under suitable management, usually recover in from forty to sixty days.

There is another class of cases who get through the fever itself with excellent prospects of recovery, yet improvement ceases before this point has been reached; the patient



then slowly recedes, gradually falling into a condition of increasing debility, strongly resembling that of extreme old age, over which treatment has little control, and the patient dies in a few months.

Cerebro-spinal fever is one of the gravest of epidemic diseases, on account of the great mortality by which it is attended, and the incurable injuries often inflicted on survivors. From sixty to eighty per cent. of those who are attacked die. It is less fatal to children below fifteen than among young adults.

*Treatment.*—Sustaining measures are needed from the first to recover the patient from the condition of prostration into which he often rapidly sinks. Heat serves an excellent purpose in the shape of bags of hot salt or bottles of water placed in the bed around the patient. The application of large mustard-plasters, covering the back and chest, do much to relieve internal congestion by drawing the blood to the surface. Mustard-plasters should be prepared by mixing pure mustard with water to the thickness of butter; then spread the mixture on paper or unbleached muslin and apply it to the part until the skin be thoroughly reddened, but not blistered.

The following compound is strongly recommended by eminent medical men, who have had very large experience in the treatment of the disease under consideration :

411 R. Bromide of potassium..... 1 ounce.  
 Tincture of belladonna..... 2 drams.  
 Water..... 6 ounces.  
 Dissolve the potassium in the water, then add the belladonna.

The dose is from one teaspoonful for a child of six or eight years to one tablespoonful for an adult every two,



three, or four hours, as may be required by the urgency of the symptoms.

Other physicians of equal skill prefer ergot, because of its power to contract the dilated vessels of the inflamed membranes, diminish the amount of blood in them, relieve the inflammation, and prevent its disastrous results. The following preparation is the best:

412 R. Squibb's fluid extract ergot..... 3 ounces.

The dose for a child from five to ten years of age is ten to fifteen drops, and for an adult from twenty-five to sixty drops, in a dessertspoonful of water, every four hours.

Dry cupping along the spinal column, should be used several times daily in order to relieve congestion of the important structures beneath.

A well-ventilated, but quiet and not too light, room should be provided. Noises, bright light, or whatever annoys the sufferer has an unfavorable effect on the progress of the disease.

The diet must be nutritious throughout the disease, but overloading the patient's stomach should be carefully avoided; milk, strong meat broths, Reed and Canrick's beef peptonoids are excellent. When there is severe prostration alcoholic stimulants are of very great service. During convalescence the use of prescription 129 will improve the appetite and increase the strength.

#### ACUTE RHEUMATISM—ACUTE RHEUMATIC FEVER.

Although this disease is not confined to children, it is yet so common among them that it demands consideration at our hands. As the symptoms to which it gives rise are frequently so much milder in young subjects than in adults, the nature of the disease is often misunderstood. Yet these



mild attacks of acute rheumatism are often accompanied by inflammation of the valves of the heart, severe enough to cause incurable cardiac disease.

*Causes.*—The most potent predisposing cause is an inherited constitutional condition, which induces an attack when any adequate exciting cause is present. This view is supported by the fact that different members of the same family are apt to suffer from rheumatic fever. The morbid principle to which the bulk of the symptoms are due is an excess of lactic acid in the blood. Cold, fatigue, exposure, melancholy, or any depressing influence is sufficient to determine an attack.

*Symptoms.*—For a few days before an attack the child will usually complain of aching pains in the limbs, stiffness of the joints, languor, chilliness, and want of appetite; the pain then becomes localized in one or more of the joints, which are found to be red, hot, and swollen. Although active fever be present, the sufferer's skin is bedewed with a copious sour perspiration. The tongue is coated with a yellow fur, the throat is sore, the bowels usually constipated, but sometimes loose. The pain in the affected joints is severe, but is greatly increased by handling or motion. The pulse is frequent, the breathing quickened; the urine is scanty, dark colored, and very acid.

This disease is not self-limited like the eruptive fevers; for instance, an attack of scarlet fever or measles comes to a favorable conclusion, at the end of a tolerably definite period, if the patient survive; but an attack of acute rheumatism may end in recovery in a week or two, and it may continue for many weeks. But while the general morbid condition persists, the disease rapidly passes from one joint to another; those that were severely affected one day are



often almost well the next ; while other joints, formerly unaffected, have become red, swollen, and painful ; in a day or two the latter may recover, the inflammation returning to the previously diseased joints. During an attack of acute rheumatism all the large joints of the body may become diseased successively, get almost well, and be again attacked. After a variable period the disease seems to become exhausted ; no fresh joint is attacked, and those last affected gradually recover, leaving the joints stiff, weak, and painful when moved. During convalescence relapses often occur, and one attack of acute rheumatism rather favors than prevents subsequent seizures.

*Complications and Remote Consequences.*—The complications sometimes attending the disease under consideration are congestion and inflammation of the lungs, pleurisy, sore throat, the dance of St. Vitus, and inflammation of the valves of the heart and pericardium. The latter two are apt to cause increasingly grave results, distressing the patient throughout life, finally ending in death, perhaps after many years.

*Treatment.* — Good nursing is exceedingly important. The bed should be narrow, and placed so that the patient shall be accessible from all sides. Soft blankets must be placed below and above the little sufferer ; no linen or cotton should come into contact with the skin. Great relief may be obtained by keeping the diseased joints quite immovable ; this may be done in the following manner : Sponge the parts with a solution of one ounce of the bicarbonate of soda in one quart of warm water, wrap them in cotton-wool, then wind over all a firm roller bandage. The coverings must be removed occasionally, and replaced after the joints have been again sponged with the solution of soda.



Most good is done by those remedies having the power to reduce the attending fever ; when the latter touches 107 degrees a fatal result is imminent ; under these circumstances there should be no hesitation in placing the little sufferer in a bath of water at blood-heat, and keeping him there until the fever be either removed or reduced to the limit of safety, but the tepid bath should not be used unless the fever rise to a dangerous point. The remedies that have been of the greatest service in the cure of acute rheumatism and preventing complications are the following ; they have found favor with all the most eminent physicians throughout the civilized world :

- 413 R. Salicylic acid..... 2 drams.  
 Acetate of potash.....  $\frac{1}{2}$  ounce.  
 Glycerine..... 1 ounce.  
 Water..... 5 ounces.  
 One teaspoonful may be given every three hours to a child of six years.

Some prefer the following preparation because it is more soluble and palatable :

- 413 $\frac{1}{2}$  R. Salicylate of sodium..... 2 drams.  
 Syrup of tolu..... 1 ounce.  
 Glycerine..... 1 ounce.  
 Water..... 4 ounces.  
 One teaspoonful every two or three hours to a child of five years.

During convalescence the patient's appetite will be improved by either of the subjoined excellent tonics :

- 414 R. Huxham's tincture of cinchona bark . . . 2 ounces.

The dose is from eight to fifteen drops, in a little milk, for children from five to fifteen years of age.



415 R.	Citrate of iron and quinine.....	15 grains.
	Catawba wine.....	2 ounces.
	Glycerine.....	1 ounce.
	Water.....	1 ounce.

Dissolve the medicine in the water, then add the glycerine and the wine.

The dose for a child of six to twelve years of age is one teaspoonful.

#### ERYSIPELAS—ST. ANTHONY'S FIRE.

Erysipelas is a disease caused by a specific poison in the blood, which produces spreading inflammation of the skin and cellular tissue beneath. Curiously enough, it is more common among young infants below the age of twelve months, and in adults than it is in children. A condition of the system favorable to the reception of the erysipelalous poison, and its development into active disease, is caused by dirty, damp, dark, ill-ventilated dwellings. Usually some local injury or irritation determines the point of attack. In unhealthy, ill-fed children the disease sometimes begins and spreads from the point where vaccination has been performed.

*Symptoms.*—Chilliness, loss of appetite, nausea, headache, muscular pains, drowsiness, restlessness, fever, and oppressed respiration often precede an attack of erysipelas. The inflammation beginning as a mere point, rapidly spreads. The inflamed skin is usually bright red, sometimes it presents a yellowish tinge; in delicate, pale infants the integument is often of a pink color. The diseased skin is puffy, and pressure with the finger leaves a deep and enduring mark. The surface of the body is dry and hot, and the tongue coated. The state of the bowels varies—sometimes loose, in others constipated; in either case the stools are often green. Small vesicles are often observed on the



skin; in severe cases these coalesce, forming large blebs. Abscesses occasionally form, around which the inflammation lingers after it has quite disappeared elsewhere. Gangrene may occur, by which important parts are destroyed. Relapses are very common. Erysipelas is an exceedingly fatal disease during infancy. More favorable results may be expected when the disease is confined to the limbs than when it affects the body or head.

Delirium is not uncommon when the disease affects the latter situation. Even after a mild attack of erysipelas the patient's strength is greatly exhausted. When death occurs it does so from this cause, and the profound blood changes taking place in severe cases. When prostration commences early in the attack, with high fever, copious diarrhœa, and dry, coated tongue, recovery can scarcely be expected. Tender infancy, old age, disease of the liver or kidneys, or chronic alcoholism greatly add to the dangers of an attack of erysipelas.

*Treatment.*—The disease being exhausting, supporting measures are required from the beginning. Strong beef-tea, milk, or the whites of eggs beaten up with milk and water should be given in small quantities at frequent intervals. The patient's strength may be supported by the wine whey prepared by mixing equal parts of dry catawba wine and milk, heating the mixture gently until coagulation take place; strain out the curd and give it to the little patient freely.

The remedy that has found most favor both for sustaining the strength, as well as checking the progress of the disease, is the following preparation of iron:

416 R.	Tincture of the chloride of iron.....	2 drams.
	Glycerine.....	1 ounce.
	Water.....	1 ounce.
Mix the ingredients by shaking.		



The dose is one-half teaspoonful to children from one to two years of age, every three hours.

Many different remedies have been applied to the diseased surface intended to prevent the spread of the inflammation. In some cases the repeated application of common white-lead paint works like a charm. In others the following compound is to be preferred :

417 R. Vaseline..... 1 ounce.  
Strong carbolic acid.....10 drops.

Mix thoroughly and keep the inflamed surface and some distance beyond constantly covered.

#### INFANTILE SORE EYES—OPHTHALMIA.

This is a disease of the eyes that commonly begins within a few days after birth. If the disease be neglected or improperly treated, the eyesight will, in all likelihood, be destroyed ; but it may always be readily cured if timely treatment be applied.

Exposure of the new-born infant's eyes to strong light, the introduction into the eyes of a particle of the material by which the skin is covered at birth by careless nurses while cleansing the face, irritating matter getting into the eyes during birth, and exposure to cold, have all been regarded as causing infantile ophthalmia.

*Symptoms.*—The outside of the eyes becomes pinkish and the inside reddened by the commencing congestion. The child avoids the light, is fretful, and sleeps little. In a few hours the eyes are closed by the swelling, and thick yellow matter pours from between them, with or even without pressure. Up to this time the eye itself is quite unaffected by the inflammatory process ; but in the course of another day the cornea may become spotted by little ulcers ;



if these be allowed to enlarge and deepen, perforation of the eye will occur, the watery humor escape, and sight be destroyed.

In other cases the inflammation is not so severe, all the symptoms being milder, and disastrous ulceration is much longer in taking place.

This form of ophthalmia is contagious; when one eye becomes affected the other seldom escapes.

*Treatment.*—Great care should be taken to prevent any matter being transferred from the diseased to the sound eye to start the disease in it. The acrid yellow matter excreted by the diseased surfaces does much injury if it be allowed to remain in the eye; it should be gently pressed out every hour and the eye washed as hereinafter directed. The following treatment we have always found to yield results of the most satisfactory character; if it be properly conducted, it will cure every case in the shortest possible time, and save the eyesight if it be uninjured when commenced. If the patient do not make rapid improvement the fault is in the operator, not in the treatment. As soon as the disease has declared itself the following solution should be injected, as directed, into the eye once only:

418   ℞.   Nitrate of silver..... 5 grains.  
          Distilled water..... 1 ounce.

The matter should be gently pressed out of the eye and wiped as clean as possible with a soft cloth. This done, about five drops of the above solution should be taken up in a very small glass-syringe; the point of the syringe should then be inserted below the upper lid at the outer angle of the eye and the solution gently thrown beneath; if this be done properly the eyelid will be puffed up by the injected fluid. The lower lid should be treated in the same manner. By



this means every part of the inflamed surface will be thoroughly reached. The smarting caused by the injection quickly subsides.

The following preparation should then be used to wash the eyes outside and to pour into them every hour after the matter has been gently squeezed out as before directed :

419 R. Powdered alum.....64 grains.  
Sweet milk..... 4 ounces.

Dissolve the alum in the milk, gently heat the solution until coagulation takes place, strain out the curd and use the whey freely as directed. Under this treatment the eye will continue to improve steadily, the redness disappearing, the swelling subsiding, and the discharge becoming scanty, clearer, and thinner. But if at the end of two or three days the quantity of matter again begins to become thicker and more copious, then the eyes must be again injected with the nitrate of silver solution and the use of the alum whey resumed until a cure has been attained.

#### INFLAMMATION AND ULCERATION OF THE NAVEL

Is sometimes observed in infants before or shortly after the umbilical cord falls off. It may occur from bandaging the child too tightly ; the pressure on the cord thus caused obstructs the circulation and sets up inflammation and ulceration. Allowing dirt to accumulate in the part may produce a like result. After continuing for a week or two, recovery may occur as soon as the navel is properly cleansed and the bandage loosened. In other cases the inflammation spreads over a surface one or two inches in diameter, and matter is discharged freely ; and if the child be feeble, ill-nourished, and scrofulous, a sort of gangrene may be developed which causes death by peritonitis, or the abdominal cavity may be



opened by extensive and deep ulceration in two or three weeks.

*Treatment.*—Cleanliness is most important in all cases. If the navel be only inflamed, the inflammation will be subdued by applying a solution of ten or twelve drops of carbolic acid in one ounce of water. Greasy applications should be avoided. If ulceration supervene, the following remedy will prove very effective :

420 R. Common molasses..... 4 ounces.  
Finely powdered golden seal.....60 grains.

Mix thoroughly and apply it to the ulcerated surface three or four times daily.

#### CONGESTION OF THE BRAIN

May occur in two forms, the active and the passive ; it consists in an excess of blood in the cerebral vessels. When the pressure of blood in the capillaries of the brain is too great and the flow rapid, the congestion is said be active ; if the pressure be excessive, but the blood flow slowly, it is called passive congestion.

*Causes.*—Congestion of the brain is sometimes the very first condition that occurs before an attack of one of the eruptive fevers. Occasionally the determination of blood to the brain, caused by one of these specific poisons, is so great that death takes place before the characteristic symptoms have time to be developed. Thus, children have been known to die of congestion of the brain due to the presence in the blood of the poisons of scarlet fever, measles, or small-pox, before the faintest eruption appeared.

Blows and falls on the head, excessive fatigue, or excitement, prolonged very hot weather, and the irritation of teething, are competent to cause cerebral congestion. Pas-



sive congestion is often caused in new-born infants by prolonged pressure during birth ; if it be simple congestion, it passes off as soon as the blood circulation has been established by the beginning of breathing. Severe paroxysms of whooping-cough produce passive congestion by preventing the return of blood from the brain. At these times the face becomes swelled and purple from determination of blood ; the brain is in very much the same condition. The cold stage of intermittent fever is always accompanied by congestion of all the internal organs, the brain included.

*Symptoms.*—Congestion of the brain is often preceded by general uneasiness, constipation, and feverishness. The head becomes hot ; the child is distressed by light, noise, or sudden motion ; severe headache is always present and repeated vomiting is rarely absent. The latter is an early and important symptom ; when it is associated with strong pulsation of the vessels of the neck and at the open of the head, it is very significant. The gravity of a case of congestion of the brain depends on the cause to which it may be due. If it be caused by excitement, fatigue, or exposure to heat, relief is readily obtained by proper treatment ; but if it be caused by a blood poison, or some change within the skull, prompt and skilful treatment is needed to save life.

If congestion of the brain be not quickly relieved it rapidly becomes incurable. Blood or water being poured forth within the skull : the former condition is called apoplexy, the latter dropsy of the brain, or serous effusion.

*Treatment.*—The essence of the disease under consideration consists in an excess of blood in the brain. The cure is to be accomplished by drawing away the blood from the brain to other parts of the body. An active cathartic, like the following, is usually of signal service :



- 421 R. Croton oil..... 1 drop.  
Sulphuric ether.....10 drops.  
Simple syrup..... 4 ounces.

Dissolve the oil in the ether and add the syrup in small quantities, shaking after every addition. The dose for a child of five years is one small teaspoonful every twenty or thirty minutes until the bowels begin to move. While waiting for the action of the cathartic, an enema of warm water and salt should be given to empty the bowels at once. Hot mustard foot-baths, or better still, hot full baths of the same character, will draw an immense quantity of blood to the skin, and relieve congestion of all the internal organs, the brain included; at the same time, cloths, wrung out of ice-water, should be applied to the head constantly.

When this treatment is employed early, before any damage has been done to the brain by the occurrence of apoplexy or dropsy, a cure can be obtained in a large proportion of cases; but if proper treatment be delayed, curable cases soon pass into a hopeless condition.

#### CHRONIC HYDROCEPHALUS—WATER ON THE BRAIN—DROPSY OF THE BRAIN.

The brain contains several cavities known as ventricles, the sides of which are in contact in the normal condition. In this disease these cavities become filled with a watery fluid; hence the name by which it is known. In some cases water accumulates between the surface of the brain and the inside of the skull.

*Causes.*—Any disorder that causes prolonged passive congestion of the brain will force the watery part of the blood to pass through the walls of the capillaries into the brain. The causes of passive congestion of the brain are mentioned



in the article on that topic. Occasionally abscesses form between the back of the throat and the front of the spinal column at the base of the brain. An abscess in this situation has been known to be the direct cause of watery cerebral effusions. When the bronchial glands are enlarged by tubercular or scrofulous deposits they are apt to make such pressure on the veins by which the blood is returned to the heart from the head as to cause dropsy of the brain. Occasionally this disease follows severe attacks of scarlet fever or prolonged diarrhœa. In other cases post-mortem examination throws no light on the causes. Water on the brain may be due to falls or blows on the head. It is not infrequently present at birth, in which case labor is rendered very difficult, perhaps impossible without the use of instruments.

In the normal condition the brain very nearly fills the cranium, therefore a very small effusion may compress it so severely as to destroy life. In fatal cases the quantity sometimes does not exceed six or eight tablespoonfuls; but occasionally life has been continued until an enormous amount of fluid accumulated within and upon the brain.

*Symptoms.*—The greater number of cases are either congenital or the symptoms begin to be developed before the sixth month, but it sometimes occurs in growing children, young adults, or even after middle life.

The commencing symptoms in different cases present very great variations. In one case before any enlargement of the head is detected the child may become irritable and fretful, with or without convulsions or squinting of the eyes. In another case the head may continue to enlarge slowly for months, and yet there may not be any other symptom that water is accumulating on the brain. As the pressure within the cranium increases, headache with a feel-



ing of weight may be felt. In some cases the little patients are peevish and irritable ; in others dull, heavy, and stupid.

Obstinate vomiting is a symptom rarely absent. Convulsions either of one or both sides of the body almost invariably occur sooner or later.

As the disease advances the child becomes dull, stupid, loses his memory, and sleeps much during the day. The little patients often become so weak as to be unable to walk, sit up in bed, or even to raise their heads from the pillow. Sometimes the appetite continues good, in other cases it is poor ; but, in either instance, flesh is usually lost. Deafness, blindness, loss of smell are gradually developed. If life be sufficiently prolonged the scene commonly ends in convulsions.

Before the child's head begins to enlarge it is not easy to determine what is the matter in these obscure cases ; but after this symptom is developed there is no difficulty about the diagnosis.

Chronic hydrocephalus often proves fatal in a few months ; in other cases a year or two may elapse before that takes place. Sometimes after the symptoms are well developed they improve or get no worse for a variable time. In a very few cases life has been prolonged in comfort for many years, although the brain disease was never removed. In very rare cases a cure has been obtained.

*Treatment.*—We regret to be obliged to say that in the vast majority of cases medicinal measures are usually of very little, frequently of no apparent service. But so long as there is life there is hope, and we should try to make an effort to save life which may be successful. The child's general health should be improved by plain nutritious food, fresh air, and by cod liver oil if it agree. The bowels ought to be moved occasionally by castor-oil, than which



there is no better laxative for children. A little yolk of egg renders the oil less disagreeable.

An attempt should be made to get rid of the excess of fluid on the brain by way of the kidneys. The following is the best diuretic in these cases :

422 R.	Iodide of potassium .....	1 dram.
	Acetate of potassium .....	1 dram.
	Glycerine .....	1 ounce.
	Water .....	3 ounces.

Dissolve the medicines in the water, then add the glycerine. The proper dose at first is one teaspoonful every four hours ; but after two or three weeks, the quantity of medicine may be doubled or trebled with benefit.

In those cases where there are no mechanical obstructions to the flow of blood from the brain, the following remedy has proved useful by contracting the cerebral capillaries and giving tone to the nerves :

423 R.	Squibb's fluid extract ergot.....	2 ounces.
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The dose is from five to ten drops three times a day. If this remedy be mixed with one teaspoonful of water and injected by a small syringe into the rectum it will be decidedly more effective. Immersing the child in a hot bath of mustard and water up to the waist daily does good by deriving the blood from the brain to the lower extremities.

#### ACUTE HYDROCEPHALUS—TUBERCULAR MENINGITIS—ACUTE WATER ON THE BRAIN.

When tubercular matter accumulates in the blood it can not remain in the vital fluid ; it must be deposited in some part of the body ; this deposit commonly occurs in the lungs, where it can be stowed away with the least possible injury, present and prospective ; but in children the tuber-



cular matter sometimes occurs in the membranes covering the base of the brain; in which case tubercular meningitis is developed. The disease under consideration is therefore closely allied to consumption of the lungs. This deadly disease occurs with special frequency in children between the ages of two and six years, but it may appear in both younger and older children. Some adults suffering from chronic pulmonary consumption are finally cut off rapidly by an acute deposit of fine tubercles at the base of the brain, causing acute inflammation of the meninges or coverings of the cerebrum.

*Symptoms.*—The symptoms presented by different cases often vary very widely, chiefly because of the extent of the tubercular deposit and the rapidity with which it occurs. The first symptoms are not well marked and may be readily attributed to other and much simpler causes. The child is evidently indisposed, he is fretful, his sleep is disturbed, he refuses to play, loses flesh and is feverish.

Young children who can not speak, cry frequently and put their hands to their heads—an evidence of pain in that part. About this period obstinate and recurrent vomiting is apt to be developed. The bowels are almost invariably constipated. Although the patient is becoming worse, the feverishness observed earlier may now abate. The restlessness often subsides and the child sleeps more than natural. The pupils of the eyes are often insensible to light, and of unequal size. In some cases there is more or less squinting.

Although the suffering little one is usually quiet and drowsy, plaintive cries are uttered, at intervals. He will take food when it is offered, but rarely asks or cries for it. Convulsions of varying severity are apt to occur at this stage. The stupor usually increases to complete coma; this,



however, is often broken by partially lucid moments. When the child is perfectly quiet the pulse may be natural, but if he be roused it will suddenly become very frequent, rising to 160 or more beats per minute. The breathing becomes slow, sighing, and irregular.

After the disease has attained this advanced stage, a delusive improvement often occurs for a short time; but it soon passes away, and the child sinks into deeper insensibility, and perhaps more violent convulsions. Death commonly occurs either during or immediately after an attack of the latter.

*Diagnosis.*—As all the symptoms present in a case of tubercular meningitis in the first stage may be caused by the approach of one of the eruptive fevers or even by some trivial disorder, it is all but impossible to determine certainly what is the matter at an early period. A correct conclusion can be reached, too often, only after the disease has advanced to an incurable stage; then it is too late to save life, if it was not so before. If, however, the following group of symptoms be present the diagnosis should not be very doubtful.

If the child, having been out of sorts for a week or two, be seized with recurrent vomiting without apparent cause. If he be sleepy between the attacks, the pulse being slow and irregular. If there be obstinate constipation, with sinking in of the abdomen and irregular, sighing respiration. If all or most of these symptoms occur together, they are very significant. Yet they are often overlooked or misunderstood until the little sufferers are beyond medical assistance.

*Treatment.*—If valuable results are to be obtained, the treatment must be commenced at an early period, unfor-



unately just at the time when an accurate diagnosis is all but impossible. The remedy that has been most useful in the treatment of this almost certainly fatal disease is the following:

424 R. Iodide of potassium.....32 grains to 180 grains.  
Water ..... 4 ounces.

One teaspoonful of the weaker solution three times a day, is a dose suitable for an infant three to six months old. The strength of the medicine should be increased in proportion to the patient's age; the strongest being suitable for a child about six years of age.

The restlessness of the earlier stages should be allayed, so that good sound sleep be afforded the little patient. The subjoined prescription is a safe and effective remedy for this purpose:

425 R. Bromide of potassium.....32 grains.  
Water ..... 2 ounces.

One, two, or even three teaspoonfuls of this solution may be given, according to the age of the patient, and repeated once or twice at intervals of thirty minutes if sleep be not obtained sooner.

Besides these medicines the patient needs the most careful nursing. The room should be quiet and cool. Abundance of good milk and strong beef-tea may be given. The bowels should be relieved by an enema of common salt and water.

If such measures, carefully carried out, prove unavailing, we may rest satisfied that medical science at present offers nothing else likely to be of any service.

#### CONVULSIONS—ECLAMPSIA.

By this term we understand any violent perversion of the bodily movements. Convulsions consist of alternate



contractions and relaxations, violent and involuntary, of various groups of muscles which in health act only under the influence of the will.

*Causes.*—In looking at a case of convulsions an inexperienced observer might be led to the conclusion that the difficulty lay in the muscular system, because the muscles are thrown into violent and involuntary action. But when we consider that the incentive to muscular action and the stimulus to muscular power are generated in the nervous centres—the brain and the spinal cord—and are conveyed to the muscles by the nerves, we understand, at once, that convulsions of all sorts are fundamentally nervous disorders. Convulsions may occur at any period of life, and arise from many diverse causes; but they are much more common among children below the age of seven years than at any subsequent period. The predisposing cause of the greater frequency of convulsions in young children is to be found in the peculiar excitability of their nervous systems. In some this peculiarity is stronger than in others; occasionally families are observed in whom there seems to be a special predisposition to convulsions during infancy. Some children seem to inherit a tendency to convulsive attacks; any slight irritation of the nerves often suffices to throw them into fits. Convulsions may also precede an attack of any of the eruptive fevers—measles, scarlet fever, or small-pox, diphtheria, pneumonia, bronchitis, or acute hydrocephalus. Spasms may be caused by teething, overloaded stomach, indigestible food, diarrhœa, constipation, or worms; changes in the mother's milk by her fits of anger, grief, or other violent emotion. Children have been frequently thrown into violent convulsions by fright, and sometimes by their own violent fits of anger, as well as by burns and scalds.



*Symptoms.*—Convulsions often occur in children without premonition, but they are not unfrequently preceded by definite premonitory symptoms. In some children, before an attack, the great toes are drawn away from the others, and the points of the thumbs pressed into the palms of the hands. The child is apt to start in its sleep and the muscles to twitch. Drowsiness and fretfulness are common. The pupils sometimes differ in size, and they do not respond readily to the influence of light and darkness. Immediately before an attack, the child usually lies quiet, having the eyes open, but takes no notice if spoken to.

*Symptoms.*—Convulsions may affect only a limited part of the body, or all the voluntary muscles may be thrown into spasms. In the latter instance the limbs are violently tossed to and fro, and the irregular contractions of the muscles of the face horribly distort the features. The eyes may be drawn inward, producing severe squinting, or they are turned upward so that the pupils are covered by the upper lids. The mouth is opened and shut violently, or the teeth may be tightly clenched. The head is either drawn backward or turned from side to side. If consciousness were not abolished the suffering would probably be terrible. The pulse is frequent and the breathing irregular if the respiratory muscles be affected. The bowels and bladder are often emptied involuntarily during the fit.

Convulsions usually terminate in a few minutes, the movements subsiding gradually, but they may last for hours and yet end in recovery.

If the fits are not severe, the cause being transient, the patient may become quite conscious as soon as the convulsions cease; in more severe and prolonged cases, the little sufferers awake stupid, bewildered, and perhaps unable to recognize their friends. If no subsequent seizures occur,



these symptoms pass away in a few hours at the farthest. When severe convulsions occur every three or four hours or oftener for several days, congestion of the brain will be produced, ending in fatal dropsy of that organ. In these cases the convulsions pass away, but the insensibility deepens, and the powers of life ebb until death closes the scene.

When convulsions are developed because of some disease of the brain, a fatal result may be expected speedily. If the fits be caused by teething, by burns or scalds, or by any other irritation which can not be immediately removed, the chances of recovery are not very favorable, particularly if the convulsions recur frequently. Convulsions are not of very grave import when they precede the eruption of scarlet fever, but recovery very rarely occurs when the fits are developed before or continue after the eruption has appeared.

*Treatment.*—When a patient is seen for the first time during an attack, it is often impossible to determine the cause of the convulsions until they are over, however skilful the observer may be. The relief of the spasms is, of course, the immediate object of treatment; and it is fortunate that, to a notable extent, the same measures are successful in obtaining immediate relief, whatever the nature of the seizure may be, provided the case be amenable to treatment. We should endeavor to soothe the nervous system, relax the muscles, and derive the blood from the brain and spinal cord to the surface of the body.

A mustard foot-bath lasting from five to fifteen minutes answers all these purposes admirably. When the patient is put into the bath the temperature should be at 99 degrees, and the heat should be increased six or eight degrees by adding hot water cautiously. At the same time, flannel



cloths wrung out of ice-water should be applied to the head and changed very often.

The bowels should be moved by an enema of salt and water; if that do not produce a free motion, castor-oil may be given if the patient be an infant; but to a child of five years or older, a few doses of prescription No. 421 would be more effective in quickly emptying the bowels. When convulsions are prolonged, watery fluid is almost certain to be effused into the brain. Therefore the spasms should be controlled as promptly as possible. The following preparation is justly valued very highly, because of the power it has to control the convulsions of children, soothe the nervous system, and induce sound, refreshing sleep:

426 R.	Bromide of potassium.....	1 dram.
	Glycerine.....	1 ounce.
	Water .....	2 ounces.

Dissolve the medicine in the water, then add the glycerine.

The dose for a child of one year is one teaspoonful every ten minutes until the convulsions cease, or begin to be controlled, and double that dose for a child of three years of age. Larger doses than these may be given with safety, but the above are usually sufficient. In very severe cases of convulsions a stronger remedy than the above may be needed; if so, chloral hydrate will answer the purpose admirably. During a fit it may be difficult or impossible to get the patient to swallow; in that case the remedy may be given by the rectum.

427 R.	Chloral hydrate.....	30 grains.
	Water.....	2 ounces.

The dose for a child of one or two years is one teaspoonful diluted with three teaspoonfuls of water. For a child



of five years, double that dose. After it is injected, prevent it being returned for a few minutes by placing a napkin at the anus. The remedy will soon be absorbed and show its power over the convulsions.

SPASMODIC LARYNGITIS—FALSE CROUP—SPASM OF THE THROAT—INTERNAL CONVULSIONS.

Although there are points in which the disorders that have been described under these various names differ, they are, for all practical purposes, so far as diagnosis and treatment are concerned, the same affections, and we think they have been described properly under the general name of internal convulsions.

Food and drink can be dispensed with for a considerable time without endangering life, but the introduction of fresh air into the lungs to purify and vitalize the blood can not be interrupted more than a very few minutes without fatal results.

The act of breathing, by which air is drawn into and expelled from the lungs, is accomplished by the alternate contraction and relaxation of a large number of muscles acting together harmoniously. Internal convulsions, by which the breathing is disordered, restricted, or stopped, consist chiefly in spasms of the muscles of the chest and throat.

*Causes.*—In some children there is a strong hereditary tendency to spasmodic affections involving an excitable state of the nervous system. When this comprehensive predisposing cause is present, very slight exciting causes give origin to either external or internal convulsions.

Insufficient food, premature weaning, poor quality of mother's milk, impure air, and whatever depresses the general health, increase the excitability of the nervous system. When a child is in this condition, internal convulsions



may be caused by a slightly sore throat, by a particle of food or a drop of liquid getting down the windpipe, by fright, by tossing a nervous child in the air playfully, by taking it from a warm room to very cold air, or by the shock of a cold bath.

In all these instances the causes being transient, the spasms pass off safely with or without effective treatment; but there are other causes, which, being irremovable, very frequently produce fatal internal convulsions. Various glands about the neck and at the roots of the lungs may become enlarged and press on certain nerves and cause the spasmodic disease in question. Bony and soft tumors at the base of the brain and in the spine, have been found to be so situated as to make such pressure on these nervous centres that irremediable internal convulsions resulted.

*Symptoms.*—A child having been previously somewhat hoarse, or had a slight cough, wakes up suddenly from sleep with a spasmodic wheeze, great difficulty of breathing, and a loud, stridulous, crowing sound, made by the air passing into the lungs through the nearly closed windpipe. This may continue for some time and then subside gradually. The spasm is sometimes so severe as to prevent breathing altogether for a few moments; but just as the little sufferer seems to be about to strangle, the convulsion almost invariably relaxes and the air enters the lungs with a loud, crowing inspiration; but in the severest cases, and sometimes in the first attack, the spasm continues until death has taken place.

*Treatment.*—During the attack the treatment should be adapted to relax the spasm and restore natural breathing. While a bath of mustard and hot water is being prepared, the suffering infant should be raised up and cold water sprin-



kled in its face ; the throat may be tickled with a feather to induce vomiting. Pounded ice may be wrapped in a cloth and laid on the abdomen and chest ; sometimes flannel, wrung out of very hot water, and laid on the chest and neck, will cause the spasm to pass away like magic. If these expedients do not succeed, the hot bath being ready, the infant should be immersed in the water up to the neck ; this rarely fails, except in necessarily fatal cases.

After the spasms have been controlled the child will fall into a sound sleep, and usually wake up quite well, to be attacked again night after night. To prevent their recurrence, the cause must be ascertained and suitable treatment adopted. If the gums be severely swollen from teething, scarification may be necessary. If the child be nursed at the breast, inquiry should be made into the habits and temper of the nurse ; if it be fed on the bottle, the manner in which this is done must be investigated. Should the infant be constipated or the condition of the stools be unhealthy, the following preparation will correct the difficulty :

428 R. Castor-oil .....1½ ounces.

Aromatic syrup of rhubarb.....2½ ounces.

Rub them together in a mortar.

The dose is from one to three teaspoonfuls, according to age.

When the little patients are pale and bloodless, a few drops of the wine of iron, after meals, will be of service. An abundance of fresh air should be supplied night and day. Exposure to the sunlight has a notably good effect. Hygienic measures, with change of air, are often promptly curative in very severe cases.

#### INFANTILE PARALYSIS.

This term is applied to loss of muscular power of a peculiar character occurring in children. It is most fre-



quently observed in those who are cutting their first teeth. Very little is positively known concerning the causes; several authorities, however, hold that inflammation of the roots of the anterior spinal nerves produces the distinctive symptoms.

*Symptoms.*—Slight fever is said to be observed in rare cases before an attack of infantile paralysis, but the child is very often in excellent health. It is often developed suddenly, sometimes after sound sleep.

The paralyzed muscles undergo wasting so that the weakened limbs become much smaller in a few months than their uninjured fellows. This is due largely to degenerative changes; fatty matter being partially substituted in place of the proper muscular structure. Although the loss of power may be nearly complete, there is little or no loss of sensation. Infantile paralysis does not come on by degrees; its full extent is developed at first. After a variable period, usually in a few days, perceptible improvement begins; the power of motion gradually returns, and whatever improvement may be obtained is permanent; relapses do not occur.

Sometimes the muscles on one side of the leg may be paralyzed, while those on the opposite side may be quite well. Because of the unequal action of opposing muscles arising in this way, club-foot in its several varieties is often developed. Although the loss of power may be so complete that the diseased parts can not be removed voluntarily; yet by persevering treatment very great and permanent improvement can be attained; but when the paralyzed muscles will not contract under the stimulus of a current of electricity, there can not be much hope of a cure.

*Treatment.*—When a child is attacked by paralysis, rest



in bed for a few days is of the utmost importance ; supply pure air, warmth, and tender nursing. The first indication is to diminish the supply of blood to the spinal cord ; for this purpose there is no known remedy equal to the following :

429 R. Squibb's fluid extract ergot . . . . . 1 ounce.

The dose for a child from one to three years of age is three to five drops in water three times a day for about ten days, not longer. At the same time an eclectic irritating plaster should be applied to that part of the spine from which the nerves supplying the paralyzed muscles proceed ; this has the effect of relieving the inflammation of the roots of the spinal nerves which is believed to exist in the disease in question. The plaster should be spread on a bit of soft leather about the size of a silver dollar, and kept in place by a bandage around the child's body. It should be removed every evening, the old plaster scraped off and fresh applied until suppuration begins. The raw surface must not be washed with water ; the matter should be removed with a soft cloth. If the irritation become severe enough to annoy the child too much, the plaster may be removed, and thick slippery-elm poultices applied until the skin be renewed.

During this time a certain amount of spontaneous improvement of the paralyzed parts will have taken place ; to encourage this and carry it to the highest attainable point should now be the objects sought by treatment. One reason why the weakened muscles shrivel, is because the blood circulation through them is slackened—they are, therefore, badly nourished. Artificial warmth should be used to maintain the circulation. The little patients should have the diseased members covered in cold weather by



warm flannels with perforated chamois garments over these. Once or twice a day the parts should be surrounded by bags of hot salt, or bottles of hot water for about one hour each time, to draw the blood where it is most urgently needed. Rubbing the limbs across the muscular fibre should not be neglected. Electricity, if used cautiously, is of service, but may be injurious. Ten to fifteen drops of the wine of iron are useful if the child be pale and bloodless. Strychnia has been used extensively for the cure of infantile paralysis, but we never knew of any case in which it was of decided value.

#### ANGULAR CURVATURE OF THE SPINE—POTT'S DISEASE OF THE SPINE.

The spinal column consists chiefly of blocks of bone piled one above the other; cushions of elastic tissue are placed between each vertebra to prevent jarring. The disease in question commences as an inflammation, by which, if it be not checked, the elastic cushions and more or less of the bodies of the vertebræ are destroyed, in very much the same way that a decaying tooth becomes hollowed out. The sides and back part of the vertebræ are formed of very dense bone, but the bodies are composed of spongy bone; therefore, the latter melts down readily under the destructive influence of inflammation and pressure. As the bones decay they fall together in front, and project behind, forming a lump on the back opposite the place where the spinal bones are being destroyed.

Before the treatment of this disease was as thoroughly understood and as successfully conducted as at present, Pott's disease always caused hunchback—a deformity which is now, thanks to improved surgical appliances and skill, very rarely seen.



*Causes.*—Scrofulous children are specially liable to this disease. Whatever tends to lower the tone of the system favors its development. These predisposing causes being present, any of the minor injuries that children are constantly receiving may begin the disease. One of the chief difficulties in the treatment of Pott's disease consists in the depth at which the trouble is situated, and the important parts in its vicinity; this renders the escape of the pus externally very difficult. If the disease continue to progress, the matter accumulates to such an extent that it finds a way out for itself, perhaps near the seat of the disease, but often at a considerable distance from it.

*Symptoms.*—For several months a child suffering from inflammation of the spinal bones that results in angular curvature will fail in health, but there is nothing specially distinctive about it. After a time, pain at the diseased part may be observed, but it is not so common as pain in the abdomen, directly caused by disease of the spine. Children having this kind of suffering are often treated for indigestion or worms, while the true nature of the difficulty is overlooked. As the disease advances, if no effective support be provided, the child feels that the spine can no longer properly support that part of the body above the diseased point, and he instinctively rests his head on his hands, his elbows on the table, or in walking he supports his body by placing his hands on his knees. Paralysis of the legs is sometimes one of the earliest symptoms. After a projection has appeared on the backbone all doubt concerning the nature of the disease is set at rest, if that was not previously the case.

*Treatment.*—These little sufferers need to be surrounded by every hygienic influence,—pure air, sunlight, good plain



food, and cleanliness are essential to recovery; besides these, the subjoined prescription does much to improve the general nutrition :

430 R. Norwegian cod liver oil. . . . . 4 ounces.

Syrup of the iodide of iron. . . . . 2 drams.

Mix the ingredients by shaking.

The dose is from one-half to one teaspoonful, three times a day, after eating.

In the disease under consideration the back is, to all intents and purposes, broken; and it requires the application of a proper splint to keep the bones in place and afford the necessary support until the disease has time to recover. Wonderful results are attained by the various apparatus now used for these purposes. In some cases the plaster of Paris jacket is the best, and in others a brace made of steel and hard rubber is better; but in all cases the instrument must be exactly adapted to the necessities of each case, and to do this the services of a skilful surgeon are required.

#### BRONCHITIS.

There is perhaps no disease from which children suffer so frequently as from inflammation of some part of the air-passages. It occurs in different degrees of intensity, which are known as the acute, the sub-acute, and the chronic varieties. When the inflammation passes down from the larger tubes into the very small ones it is called capillary bronchitis,—the most dangerous form it can assume.

Bronchitis usually occurs as an independent disease, but it is a frequent complication of whooping-cough, pneumonia, measles, and scarlet fever.

Sudden change of temperature is the cause from which most cases of bronchitis arise. The inflammatory process



at first checks the usual secretion of the mucous membrane, and it becomes drier. In a day or two the secretion is again poured forth more copiously than in health. In a short time the secretion becomes thicker and yellowish, forming the matter coughed up in what is called a cold. When the disease pursues a favorable course recovery commonly occurs in two or three weeks, or sooner if proper treatment be adopted.

Bronchitis is never dangerous when it is confined to the larger air tubes; but when children are not in vigorous health the inflammation manifests a strong tendency to extend downward to the smallest tubes. When this is the case it becomes one of the most fatal diseases to which children are liable.

*Symptoms.*—Taking cold begins by sneezing; the eyes water, with a feeling of fulness about the head and nose. The throat becomes dry and sore. Pains in the chest are common. There is usually more or less fever. Cough is developed, which is harder at first, chiefly because the secretion is tough and sticky. When the latter becomes thinner, less coughing is required to bring the matter up.

When the disease passes down into the very small tubes, the symptoms become more formidable in proportion to their extension downward. There is great and increasing difficulty in breathing. A short hacking cough continues almost without cessation, and the sticky matter that accumulates in and blocks up the tubes is raised with difficulty. The fever is high and the patient's strength rapidly fails. The face becomes bloated, and the lips and nails purple. The skin is covered with a clammy perspiration. If relief be not quickly obtained the pulse becomes small and very frequent, the breathing shallower, delirium supervenes, and the sufferer dies comatose, often preceded by convulsions.



## TREATMENT OF ACUTE BRONCHITIS.

When the inflammation is at all severe, and manifests a tendency to pass deeper into the lungs, the patient should be confined to bed and be kept warm, but the temperature of the room should not be allowed to rise above sixty-five degrees if possible,—the air of hot, close rooms is specially injurious in this disease.

The action of the skin may be promoted by placing around the patient in bed bags of hot salt, or of hot water. The same object can be attained by simple hot drinks, or by the following excellent diaphoretic:

431 R. Pleurisy root powdered.....  $\frac{1}{2}$  ounce.  
Hot water..... 1 pint.

Infuse one hour, cool and strain. The dose is from one teaspoonful to one tablespoonful, every hour, until the skin becomes moist.

A large flaxseed-meal poultice, having the surface sprinkled with mustard, applied over the chest and kept on until the skin becomes reddened, is of notable service. Great care should be had that the mustard be removed before it blisters. The constant application of hot flannel cloths to the chest is almost as useful and more cleanly than poultices.

In the beginning of the disease, when the mucous membrane of the bronchial tubes is dry and the cough frequent and tight, the following compound is of great value:

432 R. Syrup of ipecacuanha..... 3 drams.  
Acetate of potassium..... 2 scruples.  
Glycerine..... 1 ounce.  
Simple syrup..... 1 ounce.

The dose is from one to two teaspoonfuls, according to



the age of the little patient,—the smaller dose being suitable for those of less than twelve months.

To render the sticky secretion of the bronchial tubes thin and easy to expectorate is of the utmost consequence. The following remedy is promptly successful:

433 R. Carbonate of ammonia . . . . . 24 grains.  
Syrup of balsam of tolu . . . . . 1 ounce.  
Glycerine . . . . . 1 ounce.  
Water . . . . . 1 ounce.

Dissolve the carbonate in the water; then add the balsam and the glycerine. One teaspoonful, every two hours, to a child about two years of age.

Children suffering from severe attacks of acute bronchitis should not be allowed to sleep more than an hour at one time, because of the danger that the mucus will accumulate in the tubes to a dangerous extent. When this does occur a small teaspoonful of the syrup of ipecac, to cause vomiting, sometimes promptly clears out the bronchial tubes when coughing fails to do so.

#### TREATMENT OF CHRONIC BRONCHITIS.

This variety of bronchitis commonly results from repeated and improperly treated acute attacks. Patients having this disease are popularly said to have taken a cold that has settled on the lungs.

This affection has no inherent tendency to spontaneous recovery, and after a time wears down the strength and seriously impairs the general health; for this reason the little patients are usually benefited by cod liver oil, either plain or in an emulsion. Cough mixtures are urgently needed, but care should be had not to give those apt to cause nausea; they may be usefully combined with a



tonic to improve the appetite and add to the strength. The subjoined is one of the best of the kind:

434 R.	Haxham's tincture of cinchona.....	2 drams.
	Fluid extract of wild cherry.....	2 drams.
	Syrup of balsam of tolu.....	1 ounce.
	Paregoric... ..	3 drams.
	Water enough to make .....	4 ounces.

Shake the bottle. The dose for a child of two or three years is one teaspoonful three or four times a day.

The patient should be allowed plenty of sunlight and fresh air. He should be clothed warmly, and allowed to be out of doors several hours every reasonably fair day. Want of fresh air lowers the health, and indirectly favors the increase of the lung disorder.

Change of climate to a high, dry, warm situation is the most effective means of cure in every severe case.

#### NERVOUS COUGH.

This name has been applied to an obstinate sort of cough depending altogether on nervous disorder. It is neither accompanied nor caused by any detectable inflammation of the throat, bronchial tubes, or lungs. Children between the ages of three and ten or twelve years are specially liable to it; but we have met it in young women of double that age. The cough is usually short, sharp, and barking, and is very annoying because of the frequency with which the fits of coughing occur. When a child is delicate, and particularly when there is in the family a consumptive tendency, a nervous cough has often been regarded as the beginning of incurable lung disease.

When the fits of coughing are frequent and prolonged, a little mucus may collect in the throat, but there is really no expectoration, and a critical examination of the lungs shows that they are free from disease.



*Treatment.*—Cough mixtures of the sort by which ordinary colds are cured do the disease under consideration no good whatever. A tonic is needed to improve the general tone of the system, and a sedative for the nerves. We have always found the following remedies promptly successful, and, therefore, prescribe them with great confidence for the cure of nervous cough:

435 R.	Subsulphate of iron .....	5 grains.
	Dilute nitric acid.....	1 dram.
	Glycerine.....	2 ounces.
	Water enough to make.....	4 ounces.

Dissolve the iron salt in the nitric acid, add the water, filter, and lastly, add the glycerine. The dose is from one-half to one teaspoonful after meals, according to the age of the child. The small dose being adapted to a child below three years of age.

After this medicine has been taken for a week or ten days, the cough will usually have disappeared. If not, the following remedy may be relied on to complete the cure:

436 R.	Fluid extract scullcap.....	5 drams.
	Bromide of potash .....	5 drams.
	Glycerine.....	1 ounce.
	Water enough to make.....	4 ounces.
One-half to one teaspoonful in a little water between meals three times a day.		

#### STOMATITIS—INFLAMMATION OF THE MOUTH.

At the present day, when so many children are fed on the bottle, disorders of the digestive system are exceedingly common. Improper diet of course unfavorably affects the stomach in the first place, but the mucous membrane of the mouth promptly sympathizes with that of the stomach in all its troubles. The simple form of stomatitis is readily



cured by proper treatment, but if it be neglected it may assume the ulcerative form, cause the child much suffering, and perhaps seriously injure its health.

*Symptoms.*—The mucous membrane of the mouth in this disease manifests the usual signs of inflammation—heat, swelling, redness. In severe cases the gums may become swollen and spongy, bleeding readily if touched. The saliva dribbles from the mouth, and the tongue is usually coated. The little patients are fretful, and suffer pain while nursing.

In the ulcerative variety there is more pain, fretfulness, and salivation; nursing is so painful that the child may refuse the nipple altogether. The tongue is coated, the breath offensive, and there is fever.

The aphthous variety of stomatitis exists in little ulcerated points distributed over the inside of the cheeks, lips, tongue, and sometimes on the roof of the mouth.

*Treatment.*—The manner in which the child is fed should be investigated in all cases, and any error of diet corrected according to the rules laid down in this work elsewhere. When this is done effectively, simple stomatitis will often get well with little or no further treatment. If the child be very fretful and sleep badly, a few doses of prescription No. 426 will be of service. For local application the following has stood the test of time:

437 R.	Borax.....	1 dram.
	Glycerine.....	1 ounce.
	Water. ....	1 ounce.

Dissolve the borax in the water; then add the glycerine, and apply it to the inside of the mouth with a soft rag several times a day.



When the plant can be procured, it is an excellent remedy, perhaps the best, for the disease under consideration.

438 R. Fresh root of buttercup..... 1 dram.  
Warm water.....  $\frac{1}{2}$  pint.

Infuse for half an hour, strain, cool, and apply it to the diseased surfaces.

In the ulcerative variety the diseased patches should be touched with the point of a camel's-hair pencil dipped in the following solution :

439 R. Strong carbolic acid ..... 30 drops.  
Glycerine..... 3 drams.

As soon as the remedy has been applied to the surface of the ulcer any surplus must be instantly wiped off with a soft rag. The applications may be repeated at intervals of two or three days, if necessary.

In the interval the following remedy should be used to wash the mouth, as well as given internally in teaspoonful doses every three hours until a cure be effected :

440 R. Chlorate of potassium..... 1 dram.  
Glycerine..... 1 ounce.  
Water ..... 3 ounces.

The above treatment will afford good results in the aphthous variety of stomatitis.

#### THRUSH—SPRUE.

These names are applied to an inflammation of the mucous membranes of the mouth, throat, and gullet, caused in unhealthy children by the growth of a microscopic plant having as true roots, branches, and seeds as belong to plants millions of times its size.

The symptoms are very much the same as those of the disorders described in the pages preceding this sketch.



*Treatment.*—In all cases of infantile disease the manner in which the sick child is fed must be regulated, because, in a very large number of cases, disorders of children are due directly or indirectly to improper food. This done, in cases of thrush, a very good remedy is a mixture of one part sugar and two parts borax, triturated together in a mortar. A small pinch of this should be laid on the infant's tongue every two or three hours.

The following solution quickly destroys the microscopic plant, which is the immediate cause of the disease, and prevents its growth :

441 R.	Sulphite of soda.....	1 dram.
	Glycerine .....	3 drams
	Water .....	5 drams.

To be applied every hour or two by means of a camel's-hair pencil.

#### CORYZA—NASAL CATARRH—COLD IN THE HEAD.

These terms refer to an inflammation of the mucous membrane lining the nose and the upper and back part of the throat. It exists in the acute and the chronic forms. The acute variety runs its course and ends in recovery in one, or the farthest, in two weeks. An infant suffering from an acute attack of coryza nurses with great difficulty, because, the nose being blocked up, breathing is prevented while taking food.

*Symptoms.*—The immediate exciting cause of coryza is usually exposure to cold and damp, but the predisposing cause is almost always that condition of the system induced by too close confinement in hot and badly ventilated rooms. After taking a severe cold the child becomes feverish, fretful, and restless; there is a feeling of tightness across the



forehead; one or both nostrils are closed by the swelling of their mucous lining; the discharge, which is at first clear, watery, and copious, becomes, in two or three days, tough and gluey. The appetite fails, the tongue is coated, the senses of smell and taste are impaired, or temporarily destroyed.

A cold in the head is a simple disorder, if the inflammation do not go down upon the lungs, in which case serious, or even fatal, pulmonary disease may arise.

*Treatment.*—In the milder cases of acute coryza, domestic treatment usually suffices to effect a cure, because the disease has a strong natural tendency toward recovery. Warm baths, a little boneset tea, a dose or two of castor-oil if there be constipation, and rubbing the nose freely with hot oil will commonly effect a cure.

If recovery do not occur in about one week, and the disease begin to assume the chronic form, a cure is more difficult, chiefly because there is in the latter no natural tendency to recovery. In these cases the general health of the child is always at fault and needs to be corrected by better and more digestible food and hygienic surroundings. This done, some local applications to the diseased nasal mucous membrane are needed.

The following are excellent preparations for the cure of chronic nasal catarrh, either in children or adults:

- |        |                            |                 |
|--------|----------------------------|-----------------|
| 442 R. | Lime water.....            | 8 ounces.       |
|        | Strong carbolic acid.....  | 10 to 15 drops. |
| 443 R. | Common salt.....           | 1 dram.         |
|        | Strong carbolic acid.....  | 10 to 15 drops. |
|        | Water.....                 | 8 ounces.       |
| 444 R. | Borax.....                 | 1 dram.         |
|        | Chlorate of potassium..... | 20 grains.      |
|        | Glycerine.....             | 2 ounces.       |
|        | Water.....                 | 6 ounces.       |



Any of the foregoing solutions, sprayed up the nose with a hand apparatus, will cleanse and rapidly heal the inflamed membrane.

#### SIMPLE DIARRHŒA.

There are no diseases from which children suffer so frequently, or by which they are so rapidly exhausted, as disorders of the bowels.

During health there are constant currents of digested nourishment flowing from the intestines into the blood; but during a diarrhœa the nutritive matter ceases to flow into the blood, and at the same time the serum of the vital fluid pours into the intestine. The system thus suffers a double loss. For these reasons the vital powers very quickly fail under the influence of diarrhœas.

*Causes.*—The great cause of diarrhœa in children is the use of improper food, or of food the quality of which is good, but for some special reason it disagrees with the child. When food gets into the stomach it is either digested or it undergoes chemical decomposition. In the latter case it becomes a powerful irritant, and Nature washes it out of the intestines as fast as possible. To do this effectively she pours forth a quantity of fluid,—the necessary result is frequent loose motions, constituting a diarrhœa.

Some nurses give an infant food every time it cries, thinking that hunger must be the cause, when it is really suffering from overfeeding. Infants often vomit surplus food, when overfed, and remain well: others retain it, and have their stomachs and bowels disordered thereby. Milk of the best and purest quality, that agrees well with one child may seriously disagree with another, and cause severe diarrhœas. Exposure to cold may cause the same result. Teething is a fruitful cause of diarrhœal affections in young



children. Occasionally they may be traced to the presence of worms in the intestines.

Within a certain limit simple diarrhœa often does good ; it is Nature's way of ridding the bowels of decomposing matter, the presence of which is incompatible with health. But a simple diarrhœa, once begun, often runs on into the inflammatory variety if it be not checked at the proper time ; hence the importance of timely treatment.

*Symptoms.*—Before the bowels become loose the child is apt to be restless, fretful, sleep badly, have colicky pains, and vomit very sour curdled milk. The stools often contain bits of undigested curd, and they may be green when passed, or being passed nearly of the natural color, may become so afterward. Sometimes the stools are strongly acid, and excoriate the anus almost like blistering fluid. If the motions be frequent and watery, the patient will be thirsty ; flesh and strength are rapidly lost if a diarrhœa continues, but under suitable treatment a simple diarrhœa often does good and is rarely injurious.

*Treatment.*—To effect a permanent cure of diarrhœa the cause must be sought for and corrected. If the cause be allowed to operate, medicine may check the discharges, but the difficulty will surely recur. In many cases the adoption of a good for a bad diet is all that is necessary to effect a permanent cure. Giving food at regular intervals, and at no other time, is very important.

In simple diarrhœa the bowels should commonly be cleaned out by means of a dose of castor-oil, beaten up with a little yolk of egg and sugar if desired. This removes all the irritating matter remaining in the intestines that does not readily come away with the diarrhœal discharges, and without the removal of which the difficulty can not be cured.



This done, the following simple preparation is wonderfully efficacious in checking diarrhœa :

- 445 R. Solid extract logwood.....10 grains.  
 Bicarbonate of potash.....30 grains.  
 Boiling water..... 3 ounces.

Dissolve the extract in the water, then add the potassium. The dose for a child of one year is one teaspoonful every hour, for several hours, or until the discharges be checked ; after which the remedy may be given every four hours, for a day or two, in order to prevent a recurrence. The only objection to this remedy is that it stains the napkins an indelible brown color.

Occasionally it is necessary to cease giving bottle-fed infants, who have diarrhœa, any milk whatever. They may be nourished very well for a couple of days on whites of eggs, beaten up with water, to which a pinch of the bicarbonate of soda has been added.

When bits of undigested curd appear in the stools, before the bowels have become loose, diarrhœa may often be prevented by correcting the child's diet, and giving it with each meal one or two grains of pepsin to assist digestion.

In severe cases of diarrhœa, of the simple variety, the following compound may be used after a dose of castor-oil. We have never known it to fail in a properly selected case :

- 446 R. Paregoric..... 1 ounce.  
 Compound tincture of catechu....  $\frac{1}{2}$  ounce.  
 Tannin.....20 grains.

Five drops may be given every two hours, in water, to a child of one year. The dose may be increased one drop for each year.

Prescriptions for the cure of diarrhœa might be multi-



plied indefinitely, but none more efficacious than the foregoing could be offered.

CHOLERA INFANTUM—INFLAMMATORY DIARRHŒA.

This is one of the most frequent and fatal of infantile diseases, destroying multitudes every year. It is specially fatal in large cities. The causes from which inflammatory diarrhœa arises are substantially the same as those producing the simple variety; in fact, the former often begins as the latter, and only assumes the graver form when ill-treated or neglected. This is specially apt to be the case when there are protracted spells of hot weather and the nurslings are at the same time subjected to the deadly influence of foul air, want of sunlight, and uncleanness.

*Symptoms.*—At the first the symptoms of inflammatory diarrhœa do not differ from those of the simple variety, but as the disease advances, they assume graver forms; vomiting is a common symptom after a few days. At the beginning the stools are often of a natural appearance, but more watery; but they soon become green and slimy, or brown and offensive, containing lumps of cheesy-looking matter.

As the disease advances the strength and weight are rapidly reduced; extreme emaciation usually occurs before a fatal termination is reached. The skin becomes wrinkled and these little sufferers present at once a curious appearance of old age and babyhood. The skin is dry and the secretion of urine diminished, the watery portion of the blood escaping by the bowels. When the disease is protracted, boils often occur about the head, and, under the same circumstances, a dry, hacking cough may be developed. As death approaches, the infant becomes more fretful, if sufficient strength remain; but it often lies quietly



in its cot from profound exhaustion ; food is refused, the stools are less frequent, and the vomiting ceases before the close.

*Treatment.*—Medicines are usually indispensable, but are by no means the most important element in the cure of inflammatory diarrhœa. The diet of the infant must be corrected in accordance with the principles laid down in the article on infant feeding. If the child be fed on the bottle the diarrhœa often ceases promptly if the services of a healthy wet-nurse be secured.

In many cases the use of milk must be discontinued altogether for a few days. For children of three months old and upward an excellent food for temporary use may be prepared as follows : Take about one pound of the best wheat flour, tie it tightly in a muslin bag, and boil it continuously for twelve hours ; remove it from the water ; allow it to cool. When required for use grate down about two teaspoonfuls into a fine powder ; mix the grated flour with half a pint of tepid water ; boil it a few minutes ; cool it to blood heat ; then mix with the gruel thus prepared the white of one small hen's-egg, or the half, if it be a large one sweeten slightly and feed the mixture to the infant. When the vomited matters and the stools smell sour, a pinch of the bicarbonate of soda should be dissolved in each portion of food.

Change of air, to a high, dry, wholesome situation in the country, with proper diet, often promptly checks the discharges, and, in the course of a few weeks, restores the child to perfect health.

In vigorous children, in whom the disease is just beginning, a dose of castor-oil or a teaspoonful or two of the syrup of rhubarb, to clear the bowels of all offending matters, is excellent practice. But in those cases where the



purging has been severe and the child's strength failing, the laxative should be omitted and means adopted at once to check the discharges. We know of no medicine that will prove effective in so many cases as the following:

447 R. Eclectic neutralizing cordial..... .2 ounces.

One-half to one teaspoonful may be given every hour, to a child from one to three years of age.

In other cases the subjoined mixture will yield excellent results:

448 R. McMunn's elixir of opium.....16 drops.

Subnitrate of bismuth..... 2 drams.

Glycerine ..... 1 ounce.

Bicarbonate of soda..... 40 grains.

Water..... 1 ounce.

Rub the bismuth and soda with the glycerine in a mortar; then add the elixir of opium and the water; shake the vial before measuring the dose, which is one teaspoonful every two, three, or four hours for an infant of one year.

Vomiting may be controlled by the following preparations:

449 R. Strong carbolic acid..... 2 drops.

Lime water..... 2 ounces.

One teaspoonful, repeated, if necessary.

450 R. Tincture of lobelia.....10 drops.

Water..... 4 ounces.

One teaspoonful, repeated, if necessary, until the vomiting be controlled.

451 R. Tincture of ipecac..... 4 drops.

Water..... 4 ounces.

One teaspoonful, repeated, if necessary, every fifteen minutes, until the vomiting ceases.

After the diarrhœa has been controlled and the child has become convalescent, half-teaspoonful doses of the wine of iron are of service.



## CONSTIPATION.

After the nutritive part of the food has been digested and absorbed into the blood, the waste matter passes downward to be mixed with excretions from the surface of the intestines; these together form the bulk of the stools. When the latter are not too dry and solid and no mechanical impediment exists, dejections of normal amount occur at natural intervals. But if the fœces be dry and solid, if any obstruction be present, or if the vermicular motion of the intestines be sluggish, the motions are delayed and we have the condition known as constipation.

*Causes.*—Infantile constipation may be due to some internal deformity present at birth. In some cases there is a stricture of the large intestine; in other cases the anus is closed either by a membrane or by a fleshy partition of considerable thickness; or the passage of the stools may be impeded by growths springing from the internal surface of the large intestines. None of these are amenable to medical treatment; they are often quite incurable, but in all such cases the opinion of a skillful surgeon must be secured.

Constipation may be caused by defective excretion of liquid from the mucous membrane of the intestines. Bile is the natural laxative; but if the liver, which secretes the bile, be sluggish, the bowels are very apt to be in the same condition. If the mother be constipated her milk seems to cause the same difficulty in her infant; but the majority of young children who suffer from constipation do so from birth, the difficulty being due to a constitutional peculiarity.

*Treatment.*—When there is no mechanical obstruction requiring surgical interference, infantile constipation can



generally be cured with a little time and patience. In many cases the following simple method will suffice: Take a handful of fresh wheat bran, boil it half an hour in about one quart of water. By straining it through a cloth a thin mucilage will be obtained; sweeten this bran juice slightly; if the child be fed on the bottle, use it to dilute the infant's food as if it were water. If the child be nursed at the breast, give it about one tablespoonful every time after nursing. In some cases a permanent cure can be obtained by this means in a short time; in others it must be continued until the child become old enough to use a diet of meat, vegetables, and fruits. Oatmeal gruel, well boiled, strained, and used as above directed is an excellent remedy in the difficulty under consideration.

Horlick's sugar of malt, to be obtained at the drug-shops, has a similar effect.

Rubbing and kneading the abdomen with warm sweet-oil powerfully stimulates the liver to perform its functions, and increases the peristaltic motions of the intestines, enabling the latter to pass the dejections downward with the normal degree of rapidity. When masses of hardened fœces are lodged in the lower bowel, injections of tepid water and salt, or of molasses and water, quickly afford relief. An injection for an infant should consist of about four tablespoonfuls, and should be given while the infant is lying on the left side. If the fluid be retained in the bowel for a few minutes by applying a napkin, the operation will be much more effective. In obstinate cases a few daily doses of castor-oil before beginning the use of any of the above expedients favors the attainment of satisfactory results; but the habitual giving of laxative medicines to infants for constipation can not be recommended.



If a constipated infant be nursed at the breast of a mother whose bowels are sluggish, a nightly dose of the following very excellent laxative will be of notable benefit both to herself and her infant:

452 R.	Senna leaves .....	2 ounces.
	Licorice root.....	2 ounces.
	Fennel seed .....	1 ounce.
	Sulphur.....	1 ounce.
	Refined sugar.....	6 ounces

All these ingredients must be in very fine powder, and should be thoroughly mixed.

The dose for an adult is one teaspoonful stirred into a wine-glass of cold water before retiring for the night. We do not know of any laxative superior to the above.

#### WORMS.

As many as fifty different kinds of worms are known to infest the human body. Many of these are, however, extremely rare. The varieties that are most commonly met with, and require consideration in this work, are the round, the thread, and the tape-worm.

The round worm inhabits the small intestines, but often wanders far from its home. They have been known to ascend into the stomach and throat. Children have been choked to death from a round worm having crawled up the gullet, and thence down into the windpipe, which it blocked up. The female is larger than the male, and each one of the former is said to contain many millions of eggs.

The thread-worm is much smaller than the round variety, being from one-quarter to half an inch in length. Their favorite haunt is in the large intestine.

The tape-worm is a flat, ribbon-like parasite consisting of many segments. The head is scarcely larger than that of



a pin ; and one segment grows from it after another, until the worm may attain a length of many yards. Each segment contains both male and female sexual organs of generation. Flesh of swine known as measly pork contains the eggs of the tape-worm, sometimes in very great numbers. When this meat is eaten raw, as is done in some countries, or imperfectly cooked, the germs contained in it develop in the human intestine into tape-worms. These parasites retain their hold on the bowel by means of rows of hooks arranged about the head in two circles.

All the varieties of worms found in the human digestive cavity are developed from eggs which are introduced into the body either in food or drink ; they never occur spontaneously.

*Symptoms.*—Worms often give rise to colicky pains in the abdomen due to spasm of the intestinal muscular tissue, accompanied by symptoms of indigestion ; itching of the nose and anus, nausea, vomiting, and sometimes diarrhoea, are frequent symptoms.

When there are many of these parasites in the intestines, very grave symptoms are sometimes developed. Epilepsy, convulsions, chorea, paralysis, dimness of vision, deafness, mania, hypochondriasis, and various other abnormal nervous manifestations have been caused by the presence of worms, as was finally evident from the fact that these grave disorders resisted treatment until worms were discovered and expelled. But there are no symptoms that positively indicate the presence of worms.

Ocular demonstration alone renders the diagnosis positive. If a tape-worm exist in the intestine, after a time pieces of the parasite will be passed ; if round worms are present, one or more will be observed in the dejections even if no vermifuge be used. The itching of the anus caused



by thread-worms directs attention to the parts where the vermin may often be observed on inspection.

*Treatment.*—Many remedies have been used successfully to expel both round and thread worms, but we think there are none equal, certainly none superior, to santonin. Some give this remedy in divided doses at intervals of several hours, and follow with a brisk cathartic. This is not the proper way to use it. Santonin is not given for the purpose of affecting the patient's system; that should be protected as far as possible from the influence of the irritating drug. The remedy is given to destroy and expel the worms, and the sooner it gets down to where the vermin are, the better for the patient, and the worse for the worms. Therefore, an active cathartic should be given along with the santonin, the latter to poison the parasites, the former to hurry them out of the bowels.

453 R. Santonin.....15 grains.  
Refined sugar.....30 grains.

Triturate the ingredients together in a mortar, and divide into five powders. One-half of one of these powders may be given to a child aged two years. One whole powder to those from three to five years, followed by this excellent laxative:

454 R. Senna.....40 grains.  
Licorice root powdered.....40 grains.  
Jamaica ginger powdered.....20 grains.

Infuse in one small teacup of hot water for one hour, cool, strain, and give the infusion in one, two, or three tablespoonful doses every hour, according to the patient's age, until the bowels be moved freely.

In severe cases this treatment may require repetition



several times, at intervals of one week, before the worms are all expelled. To strengthen the patient, and to render it impossible for round or thread worms to exist in the intestines, the following preparation should be taken for several weeks :

455 R. Tincture chloride of iron.....90 drops.  
Glycerine..... 2 ounces.  
Water enough to make..... 4 ounces.

The dose is one-half to one teaspoonful, in a teaspoonful of milk, after meals, not more frequently than three times a day.

In cases of tape-worm the patient should be prepared for the administration of the medicine. During the preceding two days several doses of castor-oil should be given for the purpose of removing the slime in which the worm is often embedded, so that it may be reached more effectively by the medicine. During this time the patient should subsist on milk and beef-tea, both of which are absorbed in the upper part of the intestine ; the worm is thus starved. This done, either of the following medicines may be given in the morning ; in about one hour afterward a dose of castor-oil, or of prescription No. 454, will do good service in expelling the worm :

456 R. Oil of male fern.....  $\frac{1}{2}$  ounce.  
Glycerine.....  $\frac{1}{2}$  ounce.

The dose of the above, for a child of six years, is one teaspoonful.

Pelleterine, sold by Fougere & Co., of New York, is a very effective remedy against tape-worms. Directions for use accompany each package.



## NIGHT TERRORS.

This disorder is not very common, but when it does occur it is a source of great distress to the friends and of suffering to the patient. A child who has slept soundly for an hour or two, during the first part of the night, may awake screaming with terror at some imaginary but frightful object which he thinks is in the room. The child is often so overcome with terror that he does not at once recognize his parents, who have been attracted by his screams. By degrees, however, the hallucination passes away, he is reassured and drops off to sleep, or perhaps bursts into a fit of passionate weeping.

After a fit of this sort the remainder of the night is usually passed quietly; in some cases several fits occur in one night, or the trouble may arise at intervals of several days. This affection is by no means so grave as it appears,—very rarely foreshadowing any serious disease. It commonly arises from disorder of the digestive system, and attention to that, with tonic medication, readily effects a cure.

The use of a gentle laxative will be of service to relieve the liver, clear out the bowels, and overcome the constipation with which night terrors are often associated. The annexed prescription is safe and effective:

457 R. Fluid extract butternut-root bark. . . . 2 ounces.  
Tincture of Jamaica ginger. . . . . 1 dram.

Twenty drops in water, every night, for a week or two; after which the following tonic, for the nervous system, should be given until a cure has been effected:

458 R. Hypophosphite of lime. . . . . 15 grains.  
Hypophosphite of soda. . . . . 15 grains.  
Dilute phosphoric acid. . . . . 2 drams.  
Wine of iron . . . . .  $\frac{1}{2}$  ounce.  
Simple syrup. . . . . 2 ounces.  
Water to make. . . . . 4 ounces.



Dissolve the lime and soda salts in the acid, then add the other ingredients.

A child who is subject to night terrors should not be allowed heavy, indigestible food at the evening meal; he should have nothing but milk and some light farinaceous article of diet.

#### URINATION AT NIGHT—ENURESIS.

Passing water at night in bed, during sound sleep, is a very common and annoying difficulty among children of both sexes, but it is more frequently observed among boys than girls. In some cases the inability to retain the urine passes away as the child grows older, but it usually yields only to appropriate treatment. The difficulty seems to arise because the bladder is excited to involuntary contraction by the presence of a moderate or even small quantity of urine, and the discharge occurs no matter how much the patient may, during his waking hours, detest the habit and desire to be free from it.

*Treatment.*—The objects sought by treatment should be to diminish the irritability of the muscular coat of the bladder, so that no demand for the expulsion of its contents shall occur until it is quite filled, and the patient is waked up by the call to attend properly to its evacuation. The most certain and powerful remedy at our command for this purpose is belladonna. When properly administered very few cases will resist its action. It seems to have special sedative power over those muscles by which the bladder is emptied. It may be prepared as follows:

459 R.	Tincture of belladonna.....	5 drams.
	Glycerine.....	2 ounces.
	Water enough to make,.....	6 ounces.



The dose of the above prescription is one teaspoonful twice a day, for the first week; during the second week's treatment the dose may be increased to one teaspoonful and a half, and in the third week two teaspoonfuls may be given. To be finally successful the remedy must be continued for some time in increasing doses. At the end of two or three weeks the nightly discharge of urine will probably have ceased, then the belladonna may be given in diminished doses, for a week or two longer, to prevent the return of the difficulty. In a very few cases belladonna will fail, then surgical measures are the only resource.

Boys have been cured of the disorder under consideration by simply passing into the urethra a flexible bougie and allowing it to remain about one minute. When both the treatment by belladonna and bougies fail, then a cure may be attained by the application of the annexed solution to the neck of the bladder, whether the patient be male or female:

460 R. Nitrate of silver.....10 to 20 grains.  
Distilled water..... 1 ounce.

As the use of this remedy causes pain, it should not be resorted to until the treatment before prescribed has been faithfully tried and failed. A good surgeon should be employed to make the applications.

#### HERPES—SHINGLES.

This disease consists of a multitude of small vesicles rising from a patch of inflamed skin. The fluid by which they are filled is at first transparent; it then becomes milky, opaque, and finally yellowish; forms a scab that dries up and falls off, leaving a scar. The eruption occurs almost invariably on the right side of the body only, from the spine behind to the middle line in front; it never en-



circles the trunk. The disease is accompanied by a pricking, burning, tingling sensation, and sometimes with severe neuralgic pains.

A dose or two of castor-oil, if the bowels be costive or otherwise out of order, and the application of the following ointment, will allay the irritation and effect a cure :

461 R.	Precipitated carbonate of zinc.....	1 dram.
	Solution of subacetate of lead.....	10 drops.
	Dilute hydrocyanic acid.....	20 drops.
	Glycerine.....	20 drops.
	Prepared lard.....	1 ounce.

#### HIVES—NETTLE-RASH—URTICARIA.

Whatever the exciting cause of hives may be, the morbid influence exerts its power chiefly through the nervous system. Eating oysters or other shell-fish is, in some persons, a cause of hives. Dyspepsia, uterine disease, and pregnancy are accompanied in some adults of peculiar constitution by nettle-rash.

The eruption of urticaria strongly resembles the spots caused by the bites of mosquitoes, or the wheals raised on the skin by the lash of a whip. It appears and disappears, changing from place to place with surprising rapidity.

Nettle-rash is only disagreeable, not dangerous ; but it is sometimes difficult to cure, as it arises very often from diverse and very obscure causes, very difficult to detect.

*Treatment.*—The patient's diet must be carefully investigated ; children having hives, who partake freely of the rich, stimulating food adapted to adults, must be fed on a very simple, nutritious diet. Milk, farinaceous articles, and fruit should constitute the bill of fare. In many cases, when the child's diet is corrected, the skin clears off without farther treatment. In many cases a few doses of a



laxative, such as the following, will be of service in stimulating the liver and clearing out the stomach and bowels :

462 R.	Senna.....	60 grains.
	Cinchona bark.....	40 grains.
	Ginger !.....	20 grains.
	All in coarse powder.	
	Sulphate of soda.....	2 drams.
	Hot water.....	4 ounces.

Steep the first three ingredients in the water for one hour ; strain, add enough water to make the infusion measure eight tablespoonfuls ; then add the sulphate of soda. One or two tablespoonfuls should be given every hour, according to the age of the child, until the bowels be moved.

If the eruption occur at regular intervals, every second or third day, one grain of quinine twice a day will often effect a cure.

In the most chronic cases a combination of iron does great good.

463 R.	Wine of iron.....	3 ounces.
	Fowler's solution.....	20 drops.
	From one-half to one teaspoonful after each meal.	

The itching and smarting are greatly relieved by applying flannel cloths wrung out of hot water. The use of carbolic or juniper tar soap has a very soothing effect.

#### SCALL HEAD—TINEA FAVOSA.

This disease of the scalp is caused by the growth of a microscopic fungus which irritates the skin and grows down into the hair follicles. When the disease is fully developed it is easily recognized by the thick, yellow scabs that form on the scalp, often covering the whole top of the head.

*Treatment.*—A cure can be obtained only by skillful treatment with time and patience. The scabs must first be



thoroughly removed by the constant application of bread-and-milk poultices; then, all the hairs that, being diseased, will come away easily, must be detached. This done, the following prescription should be carefully used:

464 R. Sulphurous acid..... 2 ounces.  
Water..... 8 ounces.

The raw surface should be saturated with the above lotion once a day for a week, and a cloth wet in it, covered with oiled silk, should be kept on the part in the intervals. At the end of that time either of the annexed preparations will complete the cure, if the diseased surface be kept constantly and perfectly covered by the selected remedy:

465 R. Iodide of sulphur.....20 grains.  
Prepared lard..... 1 ounce.  
Triturate the ingredients together in a mortar.

466 R. Iodide of sulphur.....20 grains.  
Oil of cade..... 2 drams.  
Prepared lard..... 1 ounce.  
Triturate the ingredients together in a mortar.

#### HUMID TETTER—SALT-RHEUM—ECZEMA.

There is probably no skin disease so frequently met with as eczema. It consists of an inflammation of the integument, which assumes many different forms and produces a great variety of local symptoms. For this reason specialists have invented many divisions and names which serve only to puzzle the popular reader. Whatever forms it may assume, or the symptoms to which it gives rise, it is substantially the same disease and can be cured by the same treatment without much variation.

Eczema is a local manifestation of a disordered state of the blood, and when that is present almost any local irritation may cause an attack.



*Symptoms.*—The skin becomes reddened by the commencing inflammation, with slight swelling; minute vesicles appear, filled with watery fluid; these bursting, moisten the part; the effused fluid dries into a thin scab; which, after a time, peels off, leaving the skin thickened, hardened, and, perhaps, cracked. In severe cases the surface may become raw. These symptoms are accompanied by a burning heat, pain, and itching.

*Treatment.*—The measures employed for the cure of eczema must be constitutional and local; we must purify and enrich the blood, and heal the local disease. The stomach, liver, and bowels usually require cleansing; for this purpose prescription No. 462 is excellent. Care must be taken not to weaken the patient by using the remedy too frequently. For very delicate patients the following is a milder laxative:

467 R. Fluid extract rhubarb..... 1 dram.  
Bicarbonate of potassium..... 1 dram.  
Simple syrup..... 2 ounces.  
Water..... 1 ounce.

One teaspoonful three times a day, for a child two years of age.

Tonics are always needed, such as the following, than which there are none better for children suffering from the disease under discussion:

468 R. Citrate of iron and quinine.....10 grains.  
Glycerine ..... 1 ounce.  
Water..... 2 ounces.

Dose for a child about three years of age is one teaspoonful after meals.

The local treatment is important. The diseased surface should not be washed; to do so retards or prevents a cure. When the skin is inflamed and painful, soothing appli-



cations afford much relief. The following is one of the best :

- 469 R. Oxide of zinc..... 3 drams.  
 Glycerine ..... 2 ounces.  
 Lime water..... 2 ounces.  
 Shake the bottle and apply frequently.

When the disease has assumed the more chronic form, preparations containing tar are highly curative.

- 470 R. Yellow pine tar.....  $\frac{1}{2}$  ounce.  
 Potash soft soap.....  $\frac{1}{2}$  ounce.  
 Glycerine ..... 2 ounces.  
 Water. .... 1 ounce.

Mix the ingredients thoroughly and keep the parts constantly covered.

When the surface becomes dry, hard, and scaly, much good may be accomplished by keeping the parts constantly covered by a sheet of india-rubber. Under this sweating process the dry, hardened, cracked skin sometimes improves rapidly.

In very obstinate cases the following internal alterative remedy is often required before a cure can be attained :

- 471 R. Fowler's solution.....20 drops.  
 Acetate of potash..... 1 dram.  
 Sweet spirits of nitre..... 2 drams.  
 Glycerine..... 1 ounce.  
 Water enough to make..... 4 ounces.

DOSE—One teaspoonful three times a day, immediately after food.



# APPENDIX.

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## THE TEETH AND THEIR CARE.

WE have purposely left the subject to appear in an article by itself, for we deem it of special importance to our young readers to impress upon their minds the necessity of keeping these beautiful portals to the mouth in the best condition.

There are thirty-two teeth in an adult person, sixteen in each jaw. The four in the centre have wide, sharp edges like a chisel, for the purpose of cutting the food, and are called incisors. The next tooth on each side resembles the tearing or holding tooth of a dog, and they are called canine teeth. The next two have broader crowns or tops, with two points, and are called bicuspids. The other three on each side are grinders or molars. The incisors and canine, or eye teeth, have one fang or root, and the other two or three, which are firmly set into the jaw, and each root has its nerve running to a common nerve, which leads to the brain.

### THE FIRST TEETH OR MILK TEETH.

Nature has provided us with two sets of teeth. The first are fewer in number and smaller in size than the permanent teeth. They are called the milk teeth, and are only twenty in number. In each set of five (Figure 1) on



one-half of the jaw there are two incisors, one canine and two molars. The middle incisors usually make their appearance in the infant at seven months of age, the others at nine months, and the canine teeth at eighteen months. Two molars in each jaw at a year old, and the others at from two to three years old. As a rule, the lower teeth come before the corresponding upper ones. The time often varies, but this is the natural order in which they

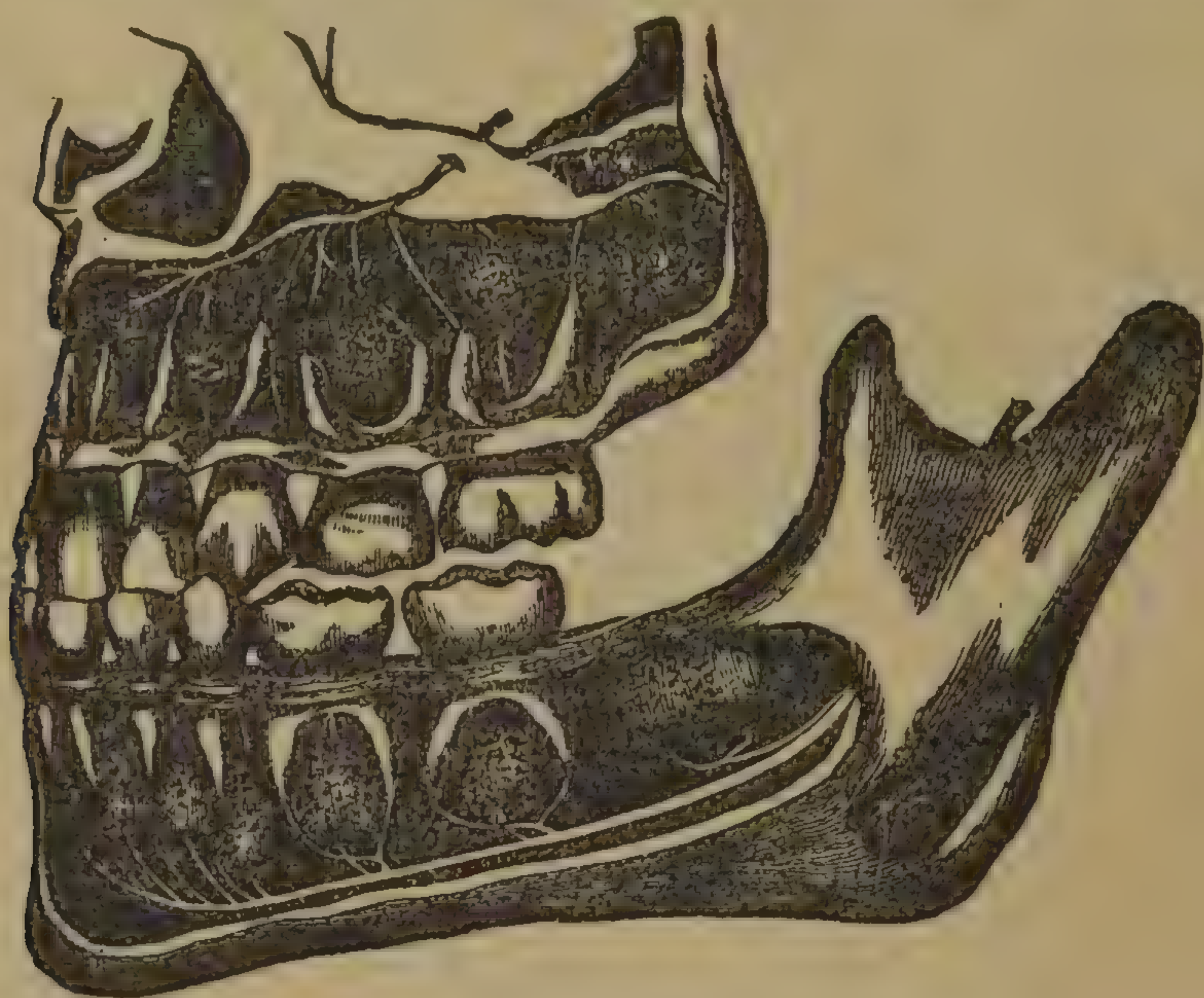


FIGURE 1.

come. These teeth remain in health until the child is about six years of age, when the crowns of the permanent teeth begin to work up against the roots of the first set, and absorbing these roots, leave the teeth to fall out, while the new ones push up to fill their places. The central incisors appear when the child is seven years of age, the other two at eight. The first bicuspid comes at nine, the rest at ten years of age. The canines are seen later, and then the first molars and the last molars at twelve or thir-



teen. The wisdom teeth do not appear until after maturity.

Figure 2 gives a good view of the permanent teeth, which are more regular in form and longer than the milk teeth, and show the natural form of the different teeth. They shut closely and evenly upon each other, and tear or grind the food by the action of the jaws in chewing. The



FIGURE 2.

bone is removed to show the roots of the teeth and their nerves. The interior of a tooth is composed of a dense substance resembling bone, called *dentine*, which in the elephant we know as ivory. The crown of the tooth which is exposed to view by friction is covered with a hard, white, glistening material, termed *enamel*. This contains a very small proportion of animal matter. The



root is covered with a thin layer of real bone. In the centre of the tooth there is a hollow cavity, filled with blood-vessels and nerves, which makes a pulpy mass, and is very sensitive. Any irritation of this, causes the toothache.

The tooth is fitted into the jaw in a most wonderful way. The socket is lined with a soft membrane, which acts as a cushion and deadens the force of any sudden jar or blow. When this becomes diseased or inflamed, it is the seat of the most severe pain. The decay of the teeth is caused by some part of the food which remains between them and quickly decomposes by the action of the moisture and heat of the mouth, or the saliva leaving on the teeth a sediment called tartar. The organic matter collects on this and a fungus appears, which is injurious to the teeth. These two causes give an offensive odor to the breath, and destroy the teeth. The excessive use of confectionery, the cracking of nuts with the teeth, drinking tea or coffee too hot, and many other things we might mention are injurious, and lead to an early decay of the teeth.

#### PRESERVATION OF THE TEETH.

Our young readers should bear in mind that the preservation of the teeth by proper care and attention is of great importance. The enamel of the tooth can never be restored after it has once been injured, and the tooth once removed can never be replaced by a natural one. However much the skill of modern dentistry can do to make up the loss, it still remains true that the natural teeth are far superior to any that the skill of man can devise. By all means, then, use every method that is healthful to preserve the natural teeth as long as possible. You should brush your teeth every morning with lukewarm water, and at



least twice a week with soap and powdered orris-root. After every meal the least particle of food should be removed from between the teeth by a quill or wooden tooth-pick. Let the teeth be examined by a competent dentist once a year, to detect if there be any small openings in the enamel, which ought to be filled as soon as they appear. Avoid the use of any gritty tooth-powder, or metal picks of any kind. Do not bite thread, crack hard nuts, or any solid substance with the teeth, for by so doing you wear away the enamel or crack it. Regular, even, and pearly-white teeth add very much to the beauty of the face, and go far in compensating for a lack at some other point. The cleanliness of the teeth is conducive to health and comfort, and these will more than repay for the trouble of taking good care to keep the teeth clean and sound. Some kinds of medicine are harmful to the teeth, turning them black and causing decay.

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### THE SKIN AND ITS CARE.

The skin, that thin, tough, and close-fitting garment which covers and protects the tender flesh of the body, is most wonderfully fitted for the use to which it is designed. It is so elastic as to conform to every moment of the limbs or body, and has an important part to do to keep it in health and vigor. It oils itself to keep its smoothness, replaces its waste, worn-out matter as fast as it is removed, and shows at the same time the perfection of beauty and use. That part we call the skin,—that is the part which rises in a blister,—is only the covering of the true skin. This outer skin is called the *cuticle*, and the inner the *cutis*. The first does not bleed, give rise to pain, or feel the heat



and cold, but the second is full of delicate nerves and blood-vessels. The outer skin is composed of flat scales, which are thrown off from the surface, and as constantly renewed from the skin below. In this *cutis*, or second skin, there are immense numbers of little cells, beyond the conception of the mind. These are flattened and hardened as they come to the surface. The *cuticle*, or outer skin, becomes thicker and harder by contact with foreign substances, as on the hand or foot. The boy who goes barefoot for the first time finds that the pebbles and briers hurt his tender feet, while the country lad who has gone unshod all summer can run where he chooses over the thistles and stones. The blacksmith has hard and horny hands which can grasp a heated iron that would burn an ordinary man, and the mason can handle brick, stone, and mortar without being scratched or injured. This is because the *cuticle* becomes thick and callous.

#### THE COMPLEXION.

There is a coloring matter between the outer and inner skin composed of tiny grains. In the tints of this pigment lies all the difference in complexion between the lightest blonde and the darkest brunette, the European and the Negro. The Jewish complexion has some of this coloring matter in it. The sun has a powerful effect upon it, causing "tan," or a browning of the skin. When this browning of the skin does not spread over all the skin, but gathers in spots, these are called freckles.

The hair and nails are modified forms of the cuticle.

#### THE PERSPIRATION.

There are an infinite number of fine tubes which run through the *cutis*, or inner skin, and this coils up in little balls. They are found in every part of the body. The



mouths of these glands,—or pores, as we call them,—may be seen through a pocket lens along the ridges which cover the skin. A vapor exudes from these pores, forming what we call *insensible perspiration*. This goes on all the time, but when excited by heat or exercise it flows out more freely in drops of moisture, commonly called sweat. This is composed of ninety-nine parts of water, and one part animal matter. On the average, an adult person throws off two pounds of this every day. We have told of two offices which the skin performs, namely, to protect the flesh, and to cast off the waste matter in perspiration; there is another:—

#### THE ABSORBING POWER.

This is not so easy of notice as the others, but we can prove that the skin does absorb or take up material from the outside. Contagious diseases are contracted in this way. Poisons are sometimes acquired by the touch.

#### CARE OF THE SKIN.

The pores of the skin ought to be kept open and free to work. Therefore the clothing should be of such a nature as to permit a free passage to the perspiration, and the waste material and dirt should be removed from the skin to allow this to go on unobstructed. Baths should be taken with regularity. The best time for this is, according to some writers, in the morning on rising from bed. The body is warm and relaxed, and needs bracing up. It can then sustain the gentle shock of moderately cool water. If the system is strong enough to cause reaction, cold water is most invigorating. After the bath the body should be rubbed dry, and the circulation stimulated by a gentle fric-



tion. At first this may be unpleasant to the sensitive skin, but the lively glow that follows will more than make up for this. Avoid taking a bath just after a hearty meal, as it will impede the digestion. Soap and unguents should be used sparingly, and followed by the use of clear water. When cold water is used the surface is chilled and the blood is driven to the heart, which increases its action and causes it to send the blood back to the surface, where it reddens, warms, and stimulates the skin. This is termed reaction. If, on the other hand, warm water is used, the blood is drawn to the surface and less goes to the heart, and languor results. After a warm bath, a dash of cold water over the body will prevent this. When the circulation of the blood is not vigorous enough, a cold bath leaves the person chilly and depressed; but the general effect of a cold bath is exhilarating and beneficial, while that of a warm bath is depressing. The latter should not be taken oftener than once a week, while the former may be taken every day without harm, if a proper reaction follows it.

A sea-water bath is very stimulating, on account of the action of the salt and the exciting surroundings. No one should swim in salt or fresh water over twenty minutes or half an hour at a time. Gentle exercise after a bath, either at home or in the air, is very beneficial. Great care should be taken to keep all parts of the person neat and clean at all times, both on account of personal health and comfort.

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## TREATMENT OF THE DROWNED.

TWO THINGS TO BE DONE—RESTORE BREATHING; RESTORE ANIMAL HEAT.

*Rule 1.*—Unless in danger of freezing, never move the patient from the spot where first rescued, nor allow by-



standers to screen off the fresh air, but *instantly* wipe, clean the mouth and nostrils, rip and remove all clothing to a little below the waist, rapidly rub dry the exposed part, and give two quick smarting slaps on the stomach with your open hand. If this does not succeed immediately, proceed to perform artificial breathing according to the following directions:

*Rule 2.*—Turn the patient on his face, as seen in Fig. 2, a large bundle of tightly rolled clothing being placed beneath his stomach, and press heavily over it upon the spine for half a minute.

*Rule 3.*—Turn the patient quickly again on his back, as seen in Fig. 1, the roll of clothing being so placed beneath as to make the short ribs bulge prominently forward, and raise them a little higher than the level of the mouth. Let some bystander hold the tip of the tongue out of one corner of the mouth with a dry handkerchief, as shown, to keep it from falling back into the throat and blocking up the air-passages to the chest, and hold both hands of the patient together, the arms being stretched forcibly above the head.

*Rule 4.*—Kneel astride the patient's hips, and with your



FIG. 1.



hands resting on his stomach spread out your fingers so that you can grasp the waist about the short ribs. Now throw all your weight steadily forward upon your hands, while you at the same time squeeze the ribs deeply, as if you wished to force everything in the chest upward out of the mouth. Continue this while you can slowly count



FIG. 2.

one—two—three—then *suddenly* let go, with a final push, which springs you back to your kneeling position. Remain erect upon your knees while you can count one—two—then throw your weight forward again as before, repeating the entire motions,—at first about four or five times a minute, and continuing with the same regularity of time and motion as is observed in the natural breathing which you are imitating.

*Rule 5.*—Continue this treatment, though apparently unsuccessful, for two hours, until the patient begins to breathe; and for awhile after this help him by well-timed



pressure to deepen his first gasps into full, deep breaths; while the friction of the limbs, which should, if possible, have been kept up during the entire process, is now further increased.

#### AFTER TREATMENT.

*Externally.*—As soon as the breathing has become perfectly natural strip the patient rapidly and completely. Enwrap him in blankets only. Put him in bed in a room comfortably warm, but with a free circulation of fresh air and except for the administration of internal treatment, let him have perfect rest.

*Internally.*—Give a little hot brandy and water, or other stimulant at hand, every 10 or 15 minutes, for the first hour, and as often thereafter as may seem expedient.

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### POISONS AND THEIR ANTIDOTES.

A few practical suggestions to the laity on medical and surgical emergencies and hygiene:

It is often important that there should be in the possession of every family a work containing in a concise and comprehensive form, within the understanding of the people, a few practical suggestions in regard to certain cases of emergency where inexperienced persons are called upon to act. Such a work will often enable one to do what is right when otherwise he would be helpless, or worse, do what is absolutely wrong. This article then is not intended to make every man his own doctor, but simply to give a few practical ideas required in emergencies where health or life is at stake.



Emergency cases, requiring the prompt administration of medicine, are more commonly found in persons who have accidentally or intentionally swallowed some form of poison; here it is necessary to do the right thing as soon as possible, and in all cases where poisons have been known to have been swallowed within one to two hours, an emetic should be given at once, and ordinarily the most convenient will be one of a tablespoonful of mustard in water, followed by the free use of warm water, or salt and water. For the special antidotes to the more common poisons the following table will guide the reader.

For the sake of order we will divide the poisons into what are termed narcotic, corrosive, irritant, and external.

The more common poisons of the first class are the various preparations of opium, belladonna, hyoscyamus, stramonium, chloral, tobacco, lobelia, aconite, alcohol, strychnine, and prussic acid.

Of the second class, only arsenic, corrosive sublimate, and the mineral acids need be mentioned.

Of the third class only the asphyxiating gases, coal gas and common illuminating gas, will be spoken of.

Of the fourth class we will mention poison oak, or poison ivy; poison sumac, or poison dogwood, and the bites of poisonous reptiles, rabid animals, and stings of insects.

In all cases where the poison is discovered within an hour or two of its administration, unless specially contraindicated under the head of the treatment of the special poison, give an emetic at once.

#### THE COMMON POISONS, WITH THEIR SYMPTOMS AND ANTIDOTES.

1. Opium, laudanum, morphine, and paregoric. *Symptoms*: Drowsiness, becoming more and more profound,



breathing becomes heavy and snoring, face flushed and dusky, pupils contracted to mere points, cessation of the respiration, finally causing deadly suffocation. *Treatment:* Vomit, if possible, with tablespoonful of mustard in water, followed by copious draughts of warm water or salt and water, then counteract the tendency to sleep by cold effusion, strong coffee, tickling of the skin, walking the patient.

2. Belladonna, atropia, stramonium, hyoscyamus. *Symptoms:* Pupils largely dilated, a period of delirious excitement, followed by convulsions, and later, by profound stupor. *Treatment:* As chemical antidotes, fresh animal charcoal, tannin, teaspoonful dose of ammonia in water. Mustard and ipecac should be used as emetics. Symptoms of drowsiness should be combated by cold douches, irritants to the skin, alcoholic stimulants.

3. Chloral. *Symptoms:* Drowsiness, diminished frequency of respiration, weakening of heart's action. *Treatment:* Warmth to the body, stimulation with strong coffee, irritation of the skin, galvanism.

4. Lobelia. *Symptoms:* Causes giddiness and headache, nausea, symptoms of intense prostration. The danger is greater and symptoms more pronounced if nausea does not exist, when stupor may be followed by convulsions and death. *Treatment:* Stomach should be washed out with warm water and tannic acid, and symptoms of depression treated by stimulants, counter irritants and friction.

5. Aconite. *Symptoms:* May kill rapidly by direct failure of the heart's action, or if the action be less rapid respiratory failure, great muscular weakness is noted, the heart's action becomes weak and irregular, the face pale, a cold sweat covers the body. *Treatment:* Stimulants to sustain the action of the heart; keep the patient most rigidly in



the recumbent position for fear of fatal syncope by suddenly sitting up.

6. Alcohol. *Symptoms*: This is sometimes difficult to distinguish from concussion or compression of the brain, or apoplexy; but ordinarily, the friends will recognize the symptoms. *Treatment*: The stomach should be emptied at once by tablespoonful of mustard in warm water, followed by copious draughts of warm water, and the patient should be roused from his perilous condition of coma by dashing cold water upon his head.

7. Strychnia. *Symptoms*: Violent convulsions leading to death by exhaustion or suffocation. *Treatment*: Tannin should be administered at once, to make an insoluble compound of that which had not been absorbed. Then evacuate the stomach and administer fifteen grain doses of chloral to antagonize its action.

8. Tobacco. *Symptoms*: In large doses it produces nausea, giddiness, disorder of vision, relaxation of the muscles, coldness of the skin, and prostration. May be followed with convulsions. *Treatment*: Give an emetic, and afterward stimulants.

9. Prussic acid. *Symptoms*: If the dose does not kill at once, symptoms of suffocation supervene, convulsive action may occur, followed by great muscular prostration, dilatation of the pupils, and quite feeble, irregular pulse. *Treatment*: Cold effusion, and the inhalation of ammonia, artificial respiration.

1. Arsenic and soluble arsenites. *Symptoms*: Burning pain in the stomach, vomiting, diarrhœa, headache, fever, and disturbed sleep, followed by prostration and death from collapse. *Treatment*: Hydrated sesqui-oxide of iron in teaspoonful doses, and calcined magnesia may be administered in milk. Also give decoction of barley or oily mixture to soothe the stomach.



2. Salts of mercury and corrosive sublimate. *Symptoms*: Same as for arsenic, only more acute and violent, as the poison is more soluble. *Treatment*: Albumen (or white of egg, flour, and water). Milk may be freely drank and vomiting encouraged. Iron filings form a chemical antidote.

3. Mineral acids, nitric, muriatic, sulphuric, nitro-muriatic. *Symptoms*: Violent burning pain in the stomach and intestines, vomiting, purging, intense prostration, and death by shock or the results of secondary inflammation. *Treatment*: Magnesia, mixed with water or milk; carbonate of lime, chalk, soda, potash, and the fixed oils.

4. Cantharides, Spanish fly. *Symptoms*: Burning sensation in the throat, violent pain in the stomach and bowels, nausea, vomiting, and purging, the dejections being frequently bloody; great heat and irritation of the urinary organs. Convulsions, lockjaw, delirium, and syncope. *Treatment*: Promote vomiting by warm drinks freely administered, flaxseed or slippery-elm tea, or mucilage water, warm baths.

1. Coal gas, illuminating gas, choke damp, charcoal gas. *Symptoms*: The first poisonous effects are noticed in the irritation of the mucous membrane of the air passage, producing cough. Afterward the patient becomes unconscious, and usually when found is in a complete or partially comatose condition, with slow respiration. Face livid or bluish, extremities cold. *Treatment*: Fresh air should immediately be admitted; friction to the skin and extremities; galvanism, stimulants, and artificial respiration; cold effusion to the head.

1. Poison ivy, or poison oak; poison dogwood, or poison sumach. *Symptoms*: Violent itching of the poisoned parts, with heat, pain, and swelling, with vesication, com



ing on from a few hours to several days after exposure. Usually at its height about the fifth day, after which desquamation begins. *Treatment*: Alum curd, or a teaspoonful of calomel in a pint of lime-water as external application. Vaseline may relieve the itching. A weak solution of ammonia in water may also be used moderately.

2. Poisoned bites of mad dogs. *Symptoms*: There are no immediate symptoms other than the pain which would follow any injury of equal severity.

3. Of snakes. *Symptoms*: Pain at the seat of injury, followed by livid redness and extensive swelling, numbness of the injured part. In from half an hour to two hours there may follow faintness, long-continued chilly sensations, cold sweats, irregular pulse, general prostration, vomiting, diarrhœa, and in severe cases convulsions and delirium.

2 and 3. *Treatment*: A moderately tight, broad ligature placed above the point of injury, then scarification and suction at the point of injury. Afterward, cauterization with the hot iron or mineral acids. If a finger or toe be bitten, amputation should be performed at the next joint above, after application of the ligature. Keep the patient quiet, and administer freely of spirits (whisky).

4. Stings of insects. *Symptoms*: Itching, soon followed by an intense pain through the entire limb, and spot at the point of puncture growing larger and becoming nearly or quite black at the centre. *Treatment*: Cold compresses, ice, lead-water, and ammonia.

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## HOW TO PROCEED IN SPECIAL ACCIDENTS.

As accidents will happen in the best regulated families, a few directions in cases of emergency may be of some



benefit in time of need. Of the graver injuries, such as fracture and dislocation, little need be said, as such cases should always be left in the most comfortable position till skilled assistance can be procured. Probably the most frequent class of injuries, and perhaps the most alarming, the laity are called upon to attend, are incised wounds, which are often accompanied by much loss of blood, which, as a rule, the temporary dresser is at a loss how to control. Let us take, first, incisions about the head. Here we have a hard, smooth surface, covered mostly by fibrous tissue and skin through which ramify many good-sized veins and arteries, hemorrhage from which may always be readily checked by a little firm pressure with the side of the finger at several points close to and on different sides of the cut till the spurting vessels cease to flow, when, having found the point or points, a compress made of several folds of cotton cloth wet may be bound upon the head, so as to keep up a steady pressure at the desired point till the blood-vessel can be secured, or, if there is no spurting, but a steady flow of darker-colored blood, a cold wet compress may be placed over the entire wound and a little steady pressure maintained. In children, who so frequently fall and cut the scalp, this treatment is ordinarily all-sufficient; and even where the cut is quite extensive (less than an inch in length) it is often best to mat the hair over the wound, and dress it in this simple manner, in preference to shaving the head and strapping or securing the wound. Simple bruises, without impairment of the continuity of the skin, should likewise be treated in this way. In dressing incised wounds of the extremities the hemorrhage is frequently aggravated by the ignorance of the dresser in tying a handkerchief tightly at random just above the point of injury. Nine times in ten this does not exert the least pressure on the



vessel which supplies the blood to the injured member, and which ordinarily lies deeply, and if possible protected by the bones ; but, on the contrary, does press directly upon the vessels which return the blood to the body, and which lie very much more superficially ; so the blood, unable to flow further toward the heart, flows out at the wound. In all severe cuts of the upper extremity below the elbow, in order to check hemorrhage, a compress should be placed over the brachial artery, which will be found at the lower third of the arm on the inside. Firm pressure made at this point, directly against the bone, will often save many a valuable ounce of human blood, and so with the lower extremities. In all severe incisions below the middle of the thigh, pressure should be made at a point about two to four inches from the top of the thigh, about the middle of the inner aspect. In nearly all other instances of hemorrhage from cuts about the trunk, the bleeding vessels should be picked up and tied at once.

#### FRACTURES AND DISLOCATIONS

will be recognized ordinarily by the pain and deformity at the point of injury, and should generally be left in as comfortable a position as possible till skilled assistance can be procured. Applications of cold water may be made to prevent excessive swelling.

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#### MEDICINAL HERBS AND THEIR VALUE.

All the vegetable medicines may be used to produce different physiological effects, according to the dose in which they are given, the condition of the patient, and the disease from which he suffers. Thus a medicine may be made to produce laxative, cathartic, diuretic, diaphoretic, and alterative effects. To point out the chief curative properties of the most valuable medicines, adapted to home practice, is



the object sought in the following pages, so that the reader may know what medicinal action to expect from the use of any given remedy.

Laxative medicines are those that move the bowels gently.

Cathartics move the bowels freely.

Hydragogue cathartics produce large watery evacuations.

Diuretics stimulate the kidneys.

Diaphoretics stimulate the skin.

Tonics increase the strength.

Alteratives are medicines that gradually change the condition of the system from disease to health.

Cholagogues relieve and stimulate the liver.

Astringents are medicines that pucker the tissues.

Styptics prevent hemorrhage.

Sedatives are medicines having a quieting action.

Anodynes relieve pain.

Emetics cause vomiting.

Stimulants are remedies that excite the system.

*Aloes*, in doses of two grains, is cathartic; in drop-doses of the tincture it is an alterative.

*Aniseed* relieves infantile colic and colds.

*Assafætida*.—Valuable in hysteria, hypochondriasis, and nervous affections generally.

*Arnica* cures bruises, sprains, local paralyses, abrasions, and wounds.

*Anconite*, in small doses, relieves fevers, and in large doses cures neuralgia.

*Amber*.—The oil is a powerful counter-irritant.

*Alum* is valuable in passive hemorrhages from the womb, stomach, or intestines. It checks the excretion of mucus in catarrh of the stomach and bowels. In the diarrhœa of typhoid fever there is perhaps no better remedy. In bronchitis, especially the sort that complicates whooping-cough, it is the best medicine. Some cases of constipation are cured by alum in full doses. Alum is a useful emetic, and



sometimes cures fever and ague after quinine has failed. Sore throat is often promptly relieved by gargles containing alum. When burnt it is one of the best applications to chilblains. As an injection in gonorrhœa, gleet, and leucorrhœa it is very useful.

*Buckthorn bark* is a very valuable laxative.

*Butternut bark* acts on the liver and bowels.

*Bethroot* checks profuse menstruation and strengthens the pains of labor.

*Blacksnake root* cures rheumatism, relieves painful menstruation, and the pains of pregnancy.

*Blue cohosh* stimulates the menstrual flow.

*Black haw* prevents abortions.

*Blackberry root* cures infantile diarrhœas.

*Blue-flag*.—A very valuable alterative and blood purifier.

*Black Indian hemp* is very effective in the removal of dropsies.

*Boneset*.—Useful in muscular rheumatism, colds, sore throat, and influenza.

*Buchu*.—Stimulates the kidneys and soothes the urinary organs.

*Broom-tops*.—Removes chronic dropsies by powerfully stimulating the kidneys.

*Belladonna*.—Cures incontinence of urine in children, and relieves the stupor sometimes seen in measles and scarlet fever.

*Bloodroot*.—A powerful alterative and a useful ingredient in cough medicines.

*Bearberry leaves*.—A useful diuretic, having a soothing influence on the urinary organs. In cases when the urine can not be retained, or when its passage is accompanied by pain the infusion yields good results. It is valuable in some kinds of diarrhœa, leucorrhœa, and hemorrhage.

*Cranesbill root* is a valuable astringent, useful in chronic diarrhœa, cholera infantum, and leucorrhœa.

*Capsicum*, mixed plentifully in strong beef tea, is the best remedy for delirium tremens.



*Cinchona bark* is the bark from which quinine is made; it is used for all the disorders for which quinine is given.

*Canada fleabane*.—Relieves irritation of the urinary organs.

*Croton oil* is a very powerful counter-irritant and a most active cathartic.

*Coriander seed* stimulates digestion.

*Calabar bean* is a powerful remedy for lockjaw.

*Cajeput* is employed in the cure of dropsy, flatulent colic, rheumatism, paralysis, and hysteria.

*Cranberry bark*, or cramp bark, relieves spasms, and convulsive diseases.

*Cereus grandiflorus* relieves functional diseases of the heart.

*Catechu*.—A powerful astringent.

*Cleavers* is said to cure some forms of cancer.

*Chamomile* increases the appetite, improves the digestion, and relieves flatulence.

*Cardamon seeds* are a gentle stimulant and warm tonic.

*Chiretta* is an excellent bitter tonic.

*Crawley root* possesses both active diuretic and diaphoretic properties.

*Cereus Bonplandii* is a useful remedy in functional diseases of the heart.

*Cloves*, oil of, cures earache and toothache.

*Cade*, oil of, a most valuable remedy for the itching of various skin diseases.

*Camphor*.—In full doses it represses sexual excitement. Injections containing camphor readily destroy pin-worms. Camphor is a useful application to sluggish ulcers. It cures the itch as readily as sulphur. Equal parts of camphor and sugar of milk form a valuable snuff for cold in the head.

*Charcoal*.—The very best remedy in flatulence, and for preventing decomposition of food in the intestines and stomach.

*Coca leaves* have a powerful effect in preventing fatigue under excessive muscular exertion.



*Comfrey root*.—A decoction of this remedy is valuable in hemorrhages from the womb, and in diarrhœa and dysentery.

*Cotton-root bark*.—A prompt remedy for painful menstruation, and in suppression of the menses from cold.

*Culver's root*.—In small doses it is an alterative, but its greatest value resides in its laxative properties.

*Damiana*.—Relieves impotence, and acts as a tonic to the nervous system generally.

*Digitalis*.—Is a valuable diuretic, and a sedative to the heart.

*Dewberry root*.—An astringent; valuable for summer diarrhœas of children.

*Ergot of rye*.—A valuable nervous tonic; one of the best remedies for headache. Useful to prevent hemorrhage after childbirth.

*Eyebright*.—A useful astringent in purulent ophthalmia and in catarrh.

*Fireweed*.—An excellent remedy in diarrhœas.

*Fringetree*.—A very valuable cholagogue.

*False unicorn root*.—A tonic for the female sexual system.

*Fennel*.—Stimulates all the secretions, milk, urine, perspiration, and the menses, and cures nausea and colic.

*Fever root*.—Has been so called because it is said to have been used by the Indians in the treatment of fevers. It is a very active cathartic.

*Figwort*.—A valuable remedy in scrofulous diseases and in the skin disorders due to this disorder.

*Golden seal*.—A valuable tonic and alterative.

*Gentian*.—A pure bitter; increases the appetite and improves digestion.

*Gallic acid*.—A powerful astringent.

*Great celadine*.—Is an active cathartic.

*Galbanum*.—Is a useful remedy in chronic bronchitis and other catarrhs.



*Geranium*.—Is a useful astringent, restraining discharges from mucous membranes.

*Guaiacum*.—Promotes menstruation in debilitated conditions of the system. It is a very valuable remedy in chronic rheumatism. In sore throat, both the simple variety and in that of diphtheria, it is curative.

*Guarana*.—A useful remedy in nervous headache.

*Hair-cap moss* is a powerful diuretic.

*Henbane* is a useful anodyne. It is used in place of opium, when the latter disagrees.

*Hemlock bark*.—The extract is useful in diarrhœas, leucorrhœas, and in nasal catarrh; an active astringent.

*Hardhack*.—Useful in various forms of diarrhœa, and in passive hemorrhages from the stomach, bowels, or womb. It forms an excellent injection in gleet and leucorrhœa.

*Ipecacuanha*.—In large doses it is an emetic; in small does it stimulates digestion.

*Indian turnip*.—It is used internally to relieve flatulence and colic, and the fresh root stewed in lard cures ringworm and other scaly diseases of the skin.

*Jaborandi*.—The most powerful of all diaphoretics.

*Jalap*.—A very active cathartic.

*Kino*.—A powerful astringent.

*Lupulin*.—The anodyne principle of hops.

*Lobelia*.—A powerful emetic.

*Life root*.—Is a valuable uterine tonic.

*Lavender*.—The best stimulant for children.

*Logwood*.—An excellent astringent in all forms of diarrhœa.

*Lorage*.—Is effective in flatulent dyspepsia, amenorrhœa, and dropsies.

*Lily-of-the-valley root*.—One of the best sedatives for functional disorders of the heart.

*Lion's foot*.—A bitter tonic; increases the appetite and improves digestion.

*Myrrh*.—Is curative in flatulence, dyspepsia, leucorrhœas, and in chronic bronchitis.

*Motherwort*.—Promotes digestion and excites the skin to action.

*Marsh rosemary*.—Acts as a diuretic, and is useful in functional nervous disorders.

*Marsh mallow*.—Is a useful remedy for coughs, and as a local application to inflammations of the skin, is valuable.

*Manaca*.—A very powerful and certain remedy for certain forms of rheumatism.

*Nux vomica*.—Is a powerful bitter tonic. It is used in dyspepsia, paralysis, night-blindness, amaurosis, diarrhœa, and dysentery.

*Opium*.—In small doses it is a powerful stimulant; in larger doses an anodyne.

*Pipsissewa*.—Is a diuretic and tonic to the urinary organs.

*Podophyllin*.—A valuable cholagogue and cathartic.

*Partridge-berry*.—A useful tonic for the female sexual organs.

*Pleurisy root*.—Is a very valuable remedy in the acute lung diseases of children.

*Poke-root*.—Useful to prevent inflammation of the breasts of nursing women.

*Prickly-ash berries*.—Excite the skin, expel wind from the bowels, and relieve the pains of muscular rheumatism.

*Parcira brava*.—A valuable diuretic; relieves irritation of the urinary organs.

*Quassia*.—A pure bitter; increases the appetite and strengthens digestion.

*Rhubarb*.—In full doses it is a valuable laxative; in small doses of the tincture, it improves the digestion of children, allays nausea, and relieves constipation.

*Sumach bark*.—The infusion forms an excellent gargle for sore throat and for the sprue in children.

*Senna*.—A very old and excellent cathartic, acting both on the liver and the bowels.



*Spear-mint*.—A hot infusion ; relieves colic, flatulence, diarrhœa, vomiting, painful menstruation, palpitation of the heart, and hiccough.

*Stramonium* is a valuable medicine in spasmodic asthma, whooping-cough, painful menstruation, and in spasmodic retention of urine.

*Sculleap*.—An effective remedy for nervousness and nervous coughs.

*Sagapenum*.—A useful remedy in chronic bronchitis with profuse secretion.

*Seven barks*.—Relieves irritation of the urinary organs as well as of the mucous membrane of the bronchial tubes.

*Saffron*.—Relieves flatulent dyspepsia and colic. It assists to throw out the eruption of measles and scarlet fever.

*Solomon's seal*.—Is a useful remedy in gout and rheumatism ; it removes freckles, and cures sprains and bruises.

*Scouring rushes*.—A very valuable remedy in irritation of the urinary organs.

*Slippery-elm bark*.—May be used as a remedy for the expulsion of tape-worms, and is an excellent application for chronic eruptions of the skin.

*Skunk-cabbage* is useful chiefly in the relief and cure of hysteria, the dance of St. Vitus, and nervous affections generally.

*Salicine*.—Increases the appetite and improves digestion. It is a very effective remedy in chronic diarrhœa.

*Sassafras*.—Is slightly stimulant, promotes digestion, and excites the functions of the skin and kidneys. It is an effective application in poisoning by poison ivy.

*Star grass*.—One of the most effective of uterine tonics.

*Trailing arbutus*.—A useful diuretic and effective for the relief of irritation of the urinary organs.

*Tag alder*.—A valuable alterative in diseases of the skin and in irritation of the mucous membranes.

*Tannin*.—An active astringent. Checks chronic diarrhœa and dysentery ; restrains both internal and external hemorrhages. An excellent application to ulceration of the mucous membranes ; an effective injection in gleet and leucorrhœa, and for all purposes for which an astringent is required.

*Virginia snakeroot*.—The infusion of this root is a valuable remedy in typhus and typhoid fevers. When the pulse is feeble and irregular, the skin cool and clammy, and the mind dull and stupid, with or without delirium.

*Valerian*.—A very valuable remedy in hysteria, and in many nervous affections, especially those caused by mental shock. It is a very useful palliative of those disorders of the nervous system that occur about the final cessation of the menses. The ammoniated tincture of valerian is effective in nervous headache.

*White-oak bark*.—The most important constituent of this bark is tannin ; it is, therefore, powerfully astringent, and may be used for all purposes for which a remedy of this character is required.

*Witch hazel*.—Has long been known as a valuable remedy in nasal catarrh, and in chronic sore-throat. It is effective in the relief and cure of piles. The soothing and healing influence of witch hazel in erysipelas and burns has long been known.

*Wahoo*.—An effective and powerful remedy in disorders of the liver, especially when complicated with malaria.

*Wild yam*.—The infusion is the best remedy in bilious colic. It is trustworthy if the drug be of good quality.

*Water pepper*.—One of the most effective remedies when the menses are suppressed from cold. It is a valuable diaphoretic, and has a soothing and tonic influence on the urinary and sexual organs.

*Yellow dock*.—A very valuable yet gentle alterative in skin disorders due to impurity of the blood. In scrofulous disease with a tendency to enlargement of the glands, there is no better remedy.

*Yellow jesamine*.—The influence of this remedy when there is determination of blood to the brain is prompt and positive. Its chief action is that of a powerful sedative, and it requires to be used with caution.

*Yarrow*.—This plant has been celebrated from ancient times for the cure of piles, and amenorrhœa, and painful menstruation.

*Yellow parilla*.—A gentle alterative.

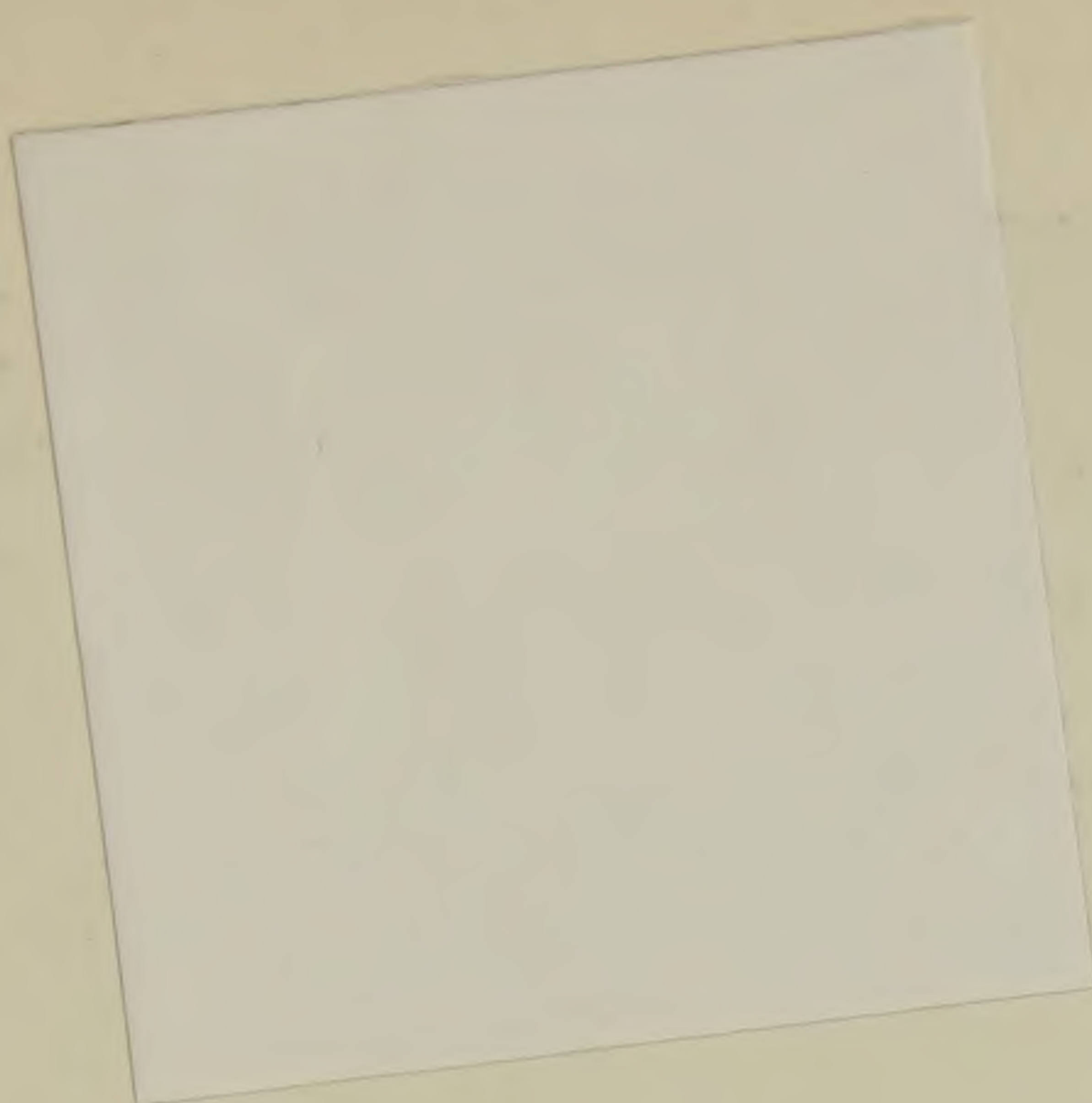








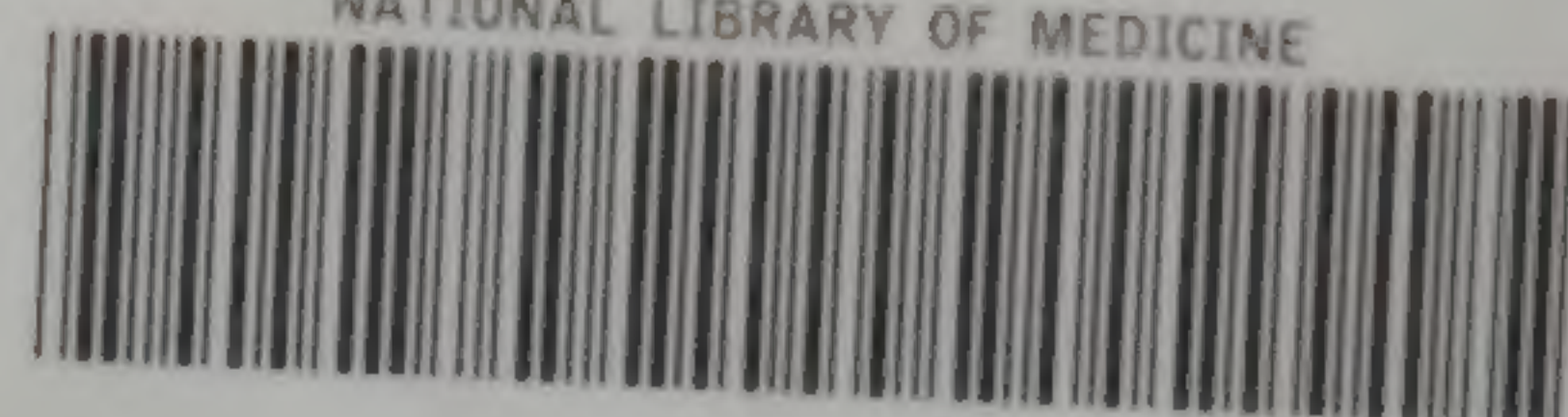




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